



# Department of Energy

Washington, DC 20585

223471

August 29, 2008



The Honorable Anne K. Quinlan  
Acting Secretary  
Surface Transportation Board  
395 E Street, S.W.  
Washington, DC 20423-0001

Re STB Finance Docket No. 35106  
United States Department of Energy --  
Rail Construction and Operation --  
Caliente Rail Line in Lincoln, Nye, and  
Esmeralda Counties, Nevada

ENTERED  
Office of Proceedings

AUG 29 2008

Part of  
Public Record

Dear Acting Secretary Quinlan:

Enclosed for filing in the above referenced matter is the Reply of the United States Department of Energy to Comments on its Application for a Certificate of Public Convenience and Necessity.

Sincerely,



Mary B. Neumayr  
Deputy General Counsel  
for Environment & Nuclear Programs



UNITED STATES OF AMERICA

BEFORE THE  
SURFACE TRANSPORTATION BOARD

223471

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Finance Docket No. 35106

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UNITED STATES DEPARTMENT OF ENERGY  
--RAIL CONSTRUCTION AND OPERATION--  
CALIENTE RAIL LINE IN LINCOLN, NYE,  
AND ESMERALDA COUNTIES, NEVADA

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REPLY OF THE UNITED STATES DEPARTMENT OF ENERGY  
TO COMMENTS ON ITS APPLICATION FOR A CERTIFICATE  
OF PUBLIC CONVENIENCE AND NECESSITY

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Pursuant to the procedural schedule established by the Surface Transportation Board (“Board” or “STB”), applicant, the United States Department of Energy (“Department” or “DOE”) submits this Reply to comments filed concerning its Application for a Certificate of Public Convenience and Necessity to construct and operate an approximately 300-mile rail line, to be known as the Caliente Rail Line, along the Caliente Corridor in Nevada (“Application”). In this Reply, DOE has summarized the comments submitted and responded to those comments by issue or category. In addition, DOE has also attached two appendices (Appendix A and Appendix B) that respond specifically to comment(s) by subject area. Appendix A summarizes and addresses technical comments and Appendix B summarizes and addresses mitigation related comments

## **I. OVERVIEW**

The proposed Caliente Rail Line will run through the City of Caliente and Lincoln, Nye and Esmeralda Counties. All four of those localities support the Application. The City of Caliente wrote in its comments: “The City of Caliente, Nevada, fully supports and endorses the DOE’s application for a Certificate of Public Convenience and Necessity for shared use of this railroad.”<sup>1</sup> Lincoln County also wrote that it “supports the DOE application for a Certificate of Public Convenience and Necessity,” subject to certain mitigation measures.<sup>2</sup> Nye County also wrote that it supports the Application and agrees that rail transportation is “the safest and most efficient manner to transport” spent nuclear

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<sup>1</sup> July 1, 2008 Comments of City of Caliente at 1

<sup>2</sup> July 7, 2008 Comments of Lincoln County at 1

fuel and high-level radioactive waste to Yucca Mountain<sup>3</sup> Esmeralda County also commented that it supports the Application.<sup>4</sup>

The affected regulated community also supports the Application. The Nuclear Energy Institute (“NEI”), whose members include all companies operating commercial nuclear power plants in the United States, urges approval of the Application, explaining that the Caliente Rail Line is critical to its members’ fuel management strategy for the safe and permanent disposal of the Nation’s spent nuclear fuel.<sup>5</sup> The National Association of Regulatory Utility Commissioners and the Nuclear Waste Strategy Coalition similarly request the Application’s approval.<sup>6</sup>

While other parties of record in this proceeding oppose the Application, none of the comments they submitted provide a basis for denying DOE’s requested certificate. The statute that governs the Board’s consideration of the Application, 49 U.S.C. § 10901, creates a presumption in favor of granting certificates of public convenience and necessity. That statute directs that the Board “shall” approve applications unless the Board affirmatively determines that the proposed rail line is “inconsistent with the public convenience and necessity.”<sup>7</sup> None of the comments submitted provide any basis for the Board to make such an affirmative determination under the three criteria that guide its consideration of public convenience and necessity.

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<sup>3</sup> April 15, 2008 Letter of J. Eastley, Chair, Nye County Board of County Commissioners (transmitting April 15, 2008 Comments of Nye County), *see also* July 7, 2008 Supplemental Comments of Nye County at 4 (stating that Nye County “generally supports” the Application)

<sup>4</sup> April 8, 2008 Comments of Esmeralda County at 1

<sup>5</sup> July 15, 2008 Comments of Nuclear Energy Institute at 3

<sup>6</sup> July 15, 2008 Comments of the National Association of Regulatory Utility Commissioners at 3 (NARUC “strongly supports” the Application), April 16, 2008 Comments of the Nuclear Waste Strategy Coalition at 1 (NWSC “encourage[s] the Board to grant DOE the Certificate of Public Convenience and Necessity”)

<sup>7</sup> 49 U.S.C. § 10901(c)

- **DOE's financial ability** No comment demonstrates that DOE, an agency of the federal government, lacks the financial ability to construct the Caliente Rail Line. While most commenters omitted any discussion whatsoever of this criterion, one commenter speculates that Congress might not authorize sufficient funds to construct the Caliente Rail Line. Such speculation is not a basis for denying the Application.
- **Public demand**. Most comments do not dispute the existence of a public demand or need for the Caliente Rail Line. Nevada disputes the existence of public demand or need, but its argument is misdirected. Nevada challenges DOE's selection of the "mostly rail" option for transporting spent nuclear fuel and high-level radioactive waste to Yucca Mountain, but DOE's decision on the transportation mode is not at issue in this proceeding. DOE is authorized to select the mode of transportation, and Nevada already has litigated, and lost, its challenge to that decision.
- **Public interest/Harm to existing services**. There are no existing rail services in the part of Nevada that the Caliente Rail Line will serve, and thus there are no existing rail services that could be harmed. Any potential impacts to grazing areas along the Caliente Rail Line would be mitigated and do not outweigh the substantial national and local interests that the Caliente Rail Line will further.

A number of comments submitted in opposition to the Application, principally those of Nevada, contend that the Application is incomplete in certain respects. Most of those comments repeat matters that the Board already rejected in connection with its denial

of Nevada's Motion to Reject the Application. The comments identify no reason for reconsideration of that denial. The comments also do not explain how these matters demonstrate that the Caliente Rail Line is "inconsistent with the public convenience and necessity "

Rather than address the three criteria that guide the Board's consideration of public convenience and necessity, most comments address potential environmental impacts. Those comments do not identify any significant adverse environmental impacts from the Caliente Rail Line. The majority of these comments repeat--often verbatim--comments submitted on the *Draft Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada – Nevada Rail Transportation Corridor*, DOE/EIS-0250F-S2D ("draft Nevada Rail Corridor SEIS") and *Draft Environmental Impact Statement for a Rail Alignment for the Construction and Operation of a Railroad in Nevada to a Geologic Repository at Yucca Mountain, Nye County, Nevada*, DOE/EIS-0369D ("draft Rail Alignment EIS"). DOE, with the Board acting as a cooperating agency, responded to those comments in finalizing those National Environmental Policy Act ("NEPA") documents

Certain commenters also propose various measures to mitigate asserted impacts of the Caliente Rail Line. The Application already addresses most of those concerns through proposed specific mitigation measures, best management practices, and Mitigation Advisory Board(s) that would develop appropriate mitigation measures. Other mitigation measures proposed by the parties would not be appropriate measures and/or concern matters outside the scope of this proceeding.



The comments of Nevada and certain other parties of record improperly seek to expand the scope of the Board's environmental review to national impacts associated with the transportation of spent nuclear fuel and high-level radioactive waste. The Board is not required to, and should not, consider any such impacts in connection with the Application. DOE is authorized to select the mode of transporting spent nuclear fuel and high-level radioactive waste to Yucca Mountain, and DOE already has considered the potential environmental impacts of various transportation modes in the *Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada*, DOE/EIS-0250F ("Yucca Mountain FEIS")

Nevada and certain other parties also improperly seek to re-open the Board's environmental review. The Board participated as a cooperating agency in the development of the Nevada Rail Corridor SEIS and Rail Alignment EIS. Neither the Board's regulations nor those of the Council of Environmental Quality ("CEQ") require the Board to conduct another round of public comments or further hearings in order to adopt those NEPA documents.

Further, some parties seek the construction of additional or alternative rail lines. Foremost among these is the request of several localities that the Board require DOE to extend the Caliente Rail Line past Yucca Mountain, and continue it to connect with a Union Pacific rail line in California.<sup>8</sup> Others urge the Board to require DOE to continue consideration of a rail line in the Mina Corridor.<sup>9</sup> These are not proper requests. The

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<sup>8</sup> *E.g.*, July 9, 2008 Comments of Churchill County at 2

<sup>9</sup> *E.g.*, July 10, 2008 Comments of Mineral County at 2

Board's decision is limited to whether the Caliente Rail Line is inconsistent with the public convenience and necessity. The Board is not authorized to second-guess DOE's route selection or to order the consideration and construction of different or additional rail lines.

In summary, the Board should grant the Application. There is no basis for the Board to find that the Caliente Rail Line is inconsistent with the public convenience and necessity, and accordingly DOE respectfully requests approval of the Application

## **II. BACKGROUND**

### **A. Nuclear Waste Policy Act**

The Nuclear Waste Policy Act of 1982, as amended ("NWPAct"), 42 U.S.C. § 10101 *et seq.*, established a comprehensive framework for the federal government to provide for the disposal of the Nation's spent nuclear fuel and high-level radioactive waste, and initiated a process to select a site for a potential geologic repository. In 2002, Congress passed and the President signed the Yucca Mountain Development Act, Public Law 107-200, approving the site at Yucca Mountain for the Nation's first permanent repository pursuant to the NWPAct. To fulfill its responsibilities under those laws, DOE must transport spent nuclear fuel and high-level radioactive waste from commercial and federal nuclear facilities to Yucca Mountain.

### **B. Environmental Review Process**

DOE issued the Yucca Mountain FEIS in 2002.<sup>10</sup> The Yucca Mountain FEIS considered a proposed action under which DOE would construct, operate and monitor and eventually close a geologic repository at Yucca Mountain, including the shipment of spent

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<sup>10</sup> 67 Fed. Reg. 65539 (Oct. 25, 2002)

nuclear fuel and high-level radioactive waste from 72 commercial and five DOE sites to the Yucca Mountain repository

DOE evaluated as part of the Yucca Mountain FEIS the potential environmental impacts of transporting spent nuclear fuel and high-level radioactive waste to the repository under a variety of modes, including legal-weight truck, rail, heavy-haul truck, and barge. Two national transportation alternatives, referred to as the mostly legal-weight truck alternative and the mostly rail alternative, and three Nevada alternatives, referred to as the legal-weight truck alternative, the rail alternative, and the heavy-truck alternative, were evaluated. In the Yucca Mountain FEIS, DOE identified the mostly rail alternative as its preferred mode of transportation, both nationally and in the State of Nevada

DOE stated in the Yucca Mountain FEIS that, if it were to select the mostly rail alternative, a rail line would need to be constructed to connect the repository site to an existing rail line in Nevada. Accordingly, the Yucca Mountain FEIS evaluated in detail the potential environmental impacts from the construction and operation of a rail line within five potential corridors--Caliente, Carlin, Caliente-Chalk Mountain, Jean, and Valley Modified. The Yucca Mountain FEIS did not identify a preferred corridor, but DOE subsequently identified the Caliente Corridor as preferred in a Federal Register notice on December 29, 2003.<sup>11</sup>

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<sup>11</sup> 68 Fed. Reg. 74951 (Dec. 29, 2003). The Dia Art Foundation asserts that DOE failed to consult with affected property owners before stating a preference for the Caliente Corridor. See July 15, 2008 Comments of Dia Art Foundation at 2. That assertion is incorrect. During development of the Yucca Mountain FEIS, DOE conducted an extensive scoping process, including conducting 15 public meetings during a 120-day comment period in 1995. DOE also held 21 public meetings during a review period on the draft EIS, which extended from August 6, 1999 to February 28, 2000. During that period, DOE received numerous comments from landowners along the corridors, including one from Michael Hiezer, the sculptor whose work is the focus of the Dia Art Foundation's concern. DOE considered those comments when selecting the Caliente Corridor for further analysis. DOE has continued to meet with persons living and conducting business along the Caliente Corridor. For example, as described in Section B.8 of the final Rail Alignment EIS (page B-11).

(continued )

On April 8, 2004, DOE announced in a Record of Decision the selection of the mostly rail alternative analyzed in the Yucca Mountain FEIS for transporting spent nuclear fuel and high-level radioactive waste nationally and within Nevada.<sup>12</sup> In making that decision, DOE carefully examined and considered various alternatives to rail and chose mostly rail as the mode of transporting the majority of spent nuclear fuel and high-level radioactive waste to Yucca Mountain.<sup>13</sup> DOE also announced in the same Record of Decision that it had selected the Caliente Corridor in which to examine possible alignments for construction of a rail line in Nevada.<sup>14</sup>

Also on April 8, 2004, DOE announced its intent to prepare a Rail Alignment EIS for the alignment, construction, and operation of a rail line for shipments of spent nuclear fuel and high-level radioactive waste, and other materials, from a site near Caliente, Lincoln County, Nevada, to the Yucca Mountain repository site in Nye County, Nevada.<sup>15</sup> The notice of intent announced a schedule for public scoping meetings, and invited comments on the scope of the Rail Alignment EIS to ensure that all relevant environmental issues and reasonable alternatives would be addressed.

During the public scoping process in 2004, DOE received comments suggesting that DOE consider a corridor along the Mina route which would traverse, in part, the reservation of the Walker River Paiute Tribe. The Tribal Council informed DOE in May,

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and B-12), DOE conducted more than 150 meetings and other interactions with stakeholders along the Caliente Corridor during 2004 to 2007

<sup>12</sup> 69 Fed. Reg. 18557 (April 8, 2004)

<sup>13</sup> *Id.* at 18558

<sup>14</sup> *Id.* at 18562. A corridor is a strip of land 400 meters (0.25 mile) wide through which DOE evaluated alignments for the construction of the rail line. A rail alignment is an engineered refinement of a rail corridor in which DOE would identify the location of a rail line. A rail alignment comprises common segments and alternative segments. *Id.* at 18558 n. 1

<sup>15</sup> 69 Fed. Reg. 18565 (April 8, 2004)

2006 that it had withdrawn a previous objection to the completion of an EIS studying the potential transportation of spent nuclear fuel and high-level radioactive waste across its reservation. DOE thereafter announced on October 13, 2006, its intent to expand the scope of the Rail Alignment EIS to incorporate analysis of the potential environmental impacts associated with constructing and operating a rail line within the Mina Corridor.<sup>16</sup> DOE also announced that it would supplement the rail corridor analysis of the Yucca Mountain FEIS by evaluating the Mina Corridor<sup>17</sup>

On October 12, 2007, DOE announced the availability of a draft Nevada Rail Corridor SEIS and draft Rail Alignment EIS<sup>18</sup> The draft Nevada Rail Corridor SEIS and draft Rail Alignment EIS addressed numerous issues, including transportation and safety, plants and wildlife, land use, cultural and paleontological resources, hydrology, and water quality, socioeconomics, environmental justice, soils and geology, air quality, aesthetics, noise and vibration, recreation, energy, and cumulative and indirect impacts

DOE held eight public hearings in Nevada, California and Washington, D.C. on the draft Nevada Rail Corridor SEIS and draft Rail Alignment EIS DOE received about 4,000 comments from nearly 1,100 commenters

On July 11, 2008, EPA announced the availability of the *Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada – Nevada Rail Transportation Corridor*, DOE/EIS-0250F-SD (“final Nevada Rail Corridor

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<sup>16</sup> 71 Fed Reg 60484 (Oct 13, 2006)

<sup>17</sup> *Id* at 60485

<sup>18</sup> Application at 2-3 These documents were submitted as Exhibit H to the Application On August 14, 2008, DOE filed these documents in electronic form on compact discs

SEIS”) and *Final Environmental Impact Statement for a Rail Alignment for the Construction and Operation of a Railroad in Nevada to a Geologic Repository at Yucca Mountain, Nye County, Nevada*, DOE/EIS-0369 (“final Rail Alignment EIS”) <sup>19</sup> These documents responded to the concerns raised in the comments on the draft Nevada Rail Corridor SEIS and draft Rail Alignment EIS, provided additional analyses of certain issues; and updated information on other matters.

The final Rail Corridor SEIS continued to identify the Caliente Corridor as DOE’s preferred option. The Mina Corridor was identified as non-preferred because, during preparation of the Nevada Rail Corridor SEIS, the Walker River Paiute Tribe reversed its position and objected to the transportation of nuclear waste across its reservation <sup>20</sup>

The Board actively participated as a cooperating agency in the development of the Nevada Rail Corridor SEIS and the Rail Alignment EIS. Through its Section of Environmental Analysis (“SEA”), the Board participated in joint scoping meetings, site visits and public hearings. It reviewed the drafts and the final version, and participated in the management council meetings to assess the comments of others.

The U.S. Air Force, Bureau of Land Management (“BLM”), Lincoln County, Esmeralda County, Nye County and the City of Caliente were also cooperating agencies on the Nevada Rail Corridor SEIS and Rail Alignment EIS.

### **C. The Application**

DOE submitted its Application to the Board on March 17, 2008. The Application requests a Certificate of Public Convenience and Necessity to construct and operate a

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<sup>19</sup> 73 Fed. Reg. 39958 (July 11, 2008). On August 14, 2008, DOE filed these documents in electronic form on compact discs.

<sup>20</sup> Final Rail Corridor SEIS at 1-8 to 1-9.

common carrier rail line within the Caliente Corridor. The new rail line would be approximately 300 miles long, connecting an existing rail line near Caliente, Nevada to the Yucca Mountain site.<sup>21</sup> The line not only would permit DOE to transport construction materials, spent nuclear fuel, and high-level radioactive waste to the Yucca Mountain repository, but also would promote economic development in rural communities in Nevada along the Caliente Corridor by making the rail line available for common carriage rail service by commercial shippers<sup>22</sup>

On April 2, 2008, the State of Nevada filed a Motion to Reject the Application<sup>23</sup> Nevada contended in the Motion to Reject that DOE had not made a “definitive decision” to allow common carriage on the Caliente Rail Line Nevada also contended that the Application was incomplete in various respects

On April 16, 2008, the Board published a notice announcing the Application.<sup>24</sup> On its own motion, the Board established a procedural schedule with filing and comment periods more extended than those in the Board’s regulations<sup>25</sup> Pursuant to that schedule, the due date for notices of intent to participate as a party of record was May 7, 2008, the due date for filing comments in support of or opposition to the Application was July 15, 2008; and the due date for DOE’s reply to those comments was August 29, 2008

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<sup>21</sup> Application at 3

<sup>22</sup> *Id.* at 3-4

<sup>23</sup> State of Nevada Motion to Reject DOE’s Application, or alternatively, to Require Responsive Comments Only After Application Has Been Fully Completed By Proper Supplement, filed April 2, 2008

<sup>24</sup> 74 Fed. Reg. 20748 (April 16, 2008)

<sup>25</sup> April 10, 2008 Decision on Notice of Construction and Operation and Adoption of Procedural Schedule, served April 11, 2008

In a June 26, 2008 Decision, served June 27, 2008, the Board denied Nevada's Motion to Reject, as amended. The Board held that it has jurisdiction over the Application and rejected each of the alleged deficiencies that Nevada ascribed to the Application.

According to the STB's docket, twenty-two parties filed comments on the Application.<sup>26</sup> DOE timely files this Reply to those comments.

### **III. JURISDICTION**

Nevada and certain other parties commented that the Board lacks jurisdiction over the Application. These parties contend that the Board lacks jurisdiction because DOE allegedly "refuses to commit that this proposed rail line will in fact be used to provide common carrier service to the general public."<sup>27</sup>

These comments repeat the jurisdictional argument in Nevada's unsuccessful Motion to Reject. The Board should reject those comments for the same reasons it gave in its Decision denying that Motion. As the Board stated there, the Board has jurisdiction over the Application because DOE has applied for permission to construct and operate a common carriage line. The Board has jurisdiction over common carriage rail lines under 49 U.S.C. § 10501, and pursuant to 49 U.S.C. § 10901, the Board has jurisdiction over applications for construction of such rail lines.<sup>28</sup>

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<sup>26</sup> The following parties filed comments: State of California, City of Caliente, Churchill County, Clark County, CSX Transportation, Inc., DIA Art Foundation, Esmeralda County, Lander County, Lincoln County, Mineral County, N-4 State Grazing Board, National Association of Regulatory Utility Commissioners, Native Community Action Council, State of Nevada, Nevada Central Railroad, Nuclear Energy Institute, Nuclear Waste Strategy Coalition, Nye County, Gracian Uhalde, Timbisha-Shoshone Tribe, Twin Springs Ranch (Fallini Trust), White Pine County.

<sup>27</sup> July 15, 2008 Comments of Nevada at 9.

<sup>28</sup> June 26, 2008 Decision at 3.



As the Board also stated, its grant of authority under § 10901 “is permissive, not mandatory.”<sup>29</sup> The Board does not compel an applicant to construct a rail line. It merely determines whether a common carrier line would be inconsistent with public convenience and necessity. The ultimate decision whether to proceed with the line rests with the applicant. As the Board wrote, “The permissive nature of our grant thus recognizes that the decision to go forward with a project is in the hands of the applicant and not this agency. We only determine whether such a common carrier project is inconsistent with the public convenience and necessity.”<sup>30</sup> In light of that permissive authority, the Board properly reasoned that its jurisdiction would be lacking only if DOE would “definitively decide that it does not wish to have common carrier service on the Caliente Line.”<sup>31</sup>

The Board thus concluded in its Decision that it has jurisdiction because “DOE has demonstrated that it is seriously considering using its line to provide common carrier service.”<sup>32</sup> That remains the case. DOE identified in the draft Rail Alignment EIS that its preferred alternative is to construct and operate a railroad along the Caliente rail alignment and to allow commercial shippers to use the rail line for general freight shipments, referred to as the Shared-Use Option.<sup>33</sup> DOE confirmed in the final Rail Alignment EIS that the Shared-Use Option was its preferred alternative.<sup>34</sup> DOE anticipates issuing a Record of Decision in the near future.

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<sup>29</sup> *Id.*

<sup>30</sup> *Id.*

<sup>31</sup> *Id.*

<sup>32</sup> *Id.*

<sup>33</sup> Draft Rail Alignment EIS at 2-114.

<sup>34</sup> Final Rail Alignment EIS at 2-117.

Nor should the Board delay its decision on the Application until the Nuclear Regulatory Commission ("NRC") decides whether to grant DOE authorization to construct the Yucca Mountain repository, as contended by Nevada and other parties<sup>35</sup> Consistent with the Board's permissive jurisdiction, the Board's certificates of public convenience and necessity do not specify time limits It is up to the applicant to decide whether and when to commence construction of an approved rail line The Board's obligation is to make its public convenience and necessity determination based on settled criteria The Board is not authorized to forgo its obligation or base its decision on extraneous considerations about the NRC's review of DOE's License Application for the Yucca Mountain repository.<sup>36</sup>

#### IV. PUBLIC CONVENIENCE AND NECESSITY

The Board's consideration of the Application is governed by 49 U.S.C. § 10901(c), which mandates issuance of a certificate of public convenience and necessity unless the Board makes an express determination that the Caliente Rail Line is inconsistent with the public convenience and necessity That section provides:

The Board ***shall issue*** a certificate authorizing activities for which such authority is requested in an application filed under subsection (b) unless the Board finds such activities are inconsistent with the public convenience and necessity Such certificate may approve the application as filed, or with modifications, and may require compliance with conditions (other than

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<sup>35</sup> July 15, 2008 Comments of State of Nevada at 41-42, *see also*, July 15, 2008 Comments of Clark County at 14

<sup>36</sup> *Great Salt Lake and Southern Railroad, L L C – Construction and Operation – in Tooele County, UT*, STB Finance Docket No. 33824, 2000 WL 1844695 (STB Decided Dec. 13, 2000) (*Great Salt Lake*) at \*4 (granting certificate of public convenience and necessity for rail line to serve the Private Fuel Storage ("PFS") Facility for spent nuclear fuel over opponents' argument that the STB should defer decision until the NRC decides whether to grant a construction authorization for the PFS facility, stating "it is up to the NRC, and not the Board, to determine whether or not the storage facility should be built.")

labor protection conditions) the Board finds necessary in the public interest.<sup>37</sup>

This permissive licensing policy creates a statutory presumption that applications for new rail lines and new rail operations are to be approved.<sup>38</sup>

The Board's determination of public convenience and necessity "has become less restrictive over the years as a result of the pro-competitive policies reflected in the line construction provisions in the Staggers Rail Act of 1980 . . . and [the ICC Termination Act]."<sup>39</sup> The following three factors now guide the Board's public convenience and necessity determination in implementing this pro-construction policy. (1) whether the applicant is financially able to undertake the project and provide rail service, (2) whether there is a public demand or need for the proposed service, and (3) whether the proposal is in the public interest and will not unduly harm existing services<sup>40</sup> "Under this new standard, 'proposed rail construction projects are to be given the benefit of the doubt.'"<sup>41</sup>

#### **A. DOE's Financial Ability**

The purpose of the Board's inquiry regarding an applicant's finances is not to assess whether the proposed line is a worthwhile investment, but to assess whether the cost

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<sup>37</sup> 49 U.S.C. § 10901(c) (emphasis added)

<sup>38</sup> *Mid States Coalition for Progress v. Surface Transportation Board*, 345 F.3d 520, 552 (8th Cir. 2003) *Accord*, *Tongue River Railroad Company, Inc.—Construction and Operation Western Alignment*, STB Finance Docket No. 30186, 2007 WL 2936132 (STB decided Oct. 5, 2007) (*Tongue River III*) at 7-8 ("Under 49 U.S.C. § 10901(c), the Board is directed to authorize the construction and operation of a proposed new line 'unless the Board finds that such activities are inconsistent with the public convenience and necessity' (PC&N). This permissive licensing policy reflects a statutory presumption adopted in the ICC Termination Act of 1995 (ICCTA) that new rail lines and new rail operations should be approved.")

<sup>39</sup> *Norfolk Southern Corp. and Norfolk Southern Railway Company—Construction and Operation—in Indiana County, PA*, STB Finance Docket 33928, 2003 WL 21132522 (STB decided May 15, 2003) (*Norfolk Southern*) at \*4

<sup>40</sup> *Mid States*, 345 F.3d at 533, *Tongue River III*, 2007 WL 2936132 at 48, *Dakota, Minn. & E. R.R. Constr. into the Powder River Basin*, 1998 WL 869567, 3 S.T.B. 847, 863 (1988)

<sup>41</sup> *Great Salt Lake* at 3, quoting *Dakota, Minnesota & Eastern R.R. Construction into the Powder River Basin*, STB Finance Docket No. 33407 (STB served Dec. 10, 1998), slip op. at 17 (*DM&E*)

of the proposed line would interfere with the applicant's ability to continue to provide existing rail service.<sup>42</sup> This criterion has little, if any, applicability to an applicant, such as DOE, with no existing rail service.<sup>43</sup>

In any event, none of the parties has raised any legitimate concern about DOE's financial ability to build, maintain and operate the Caliente Rail Line. As stated in the Application, the proposed source of funding for the Caliente Rail Line is the Nuclear Waste Fund, which was established pursuant to the NWPA.<sup>44</sup> The present value of the Nuclear Waste Fund is approximately \$21.6 billion.<sup>45</sup> No party contests this figure.

For its part, Nevada raises several misplaced questions about financial information, none of which casts doubt on DOE's financial ability to build, maintain and operate the Caliente Rail Line.

- Nevada argues that DOE "offers no explanation" why the estimated construction cost in the Application is higher than the estimated cost in the draft Rail Alignment EIS.<sup>46</sup> Contrary to Nevada's assertion, however, DOE explained in the Application that the estimate in the draft Rail Alignment EIS is based on 2005 dollars, the estimate in the Application is based on 2008 dollars.<sup>47</sup> Moreover, Nevada does not contend that the current estimate in the Application is incorrect or that DOE is

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<sup>42</sup> *Tongue River III*, 2008 WL 676490 (STB decided March 12, 2008) at n. 15.

<sup>43</sup> See, *Tongue River I*, 1 STB at 829 ("with no current shippers to be adversely affected, we leave it to the 'financial market itself' to ultimately determine if the project is economically viable").

<sup>44</sup> 42 U.S.C. § 10222.

<sup>45</sup> Application, Exhibit E/F.

<sup>46</sup> July 15, 2008 Comments of State of Nevada at 50-51.

<sup>47</sup> Application at § 1150.6(c), Table 3.

unable to afford that sum. Nevada's comment is thus irrelevant to the Board's determination

- Also irrelevant are Nevada's comments in which it questions the cost estimates for the Caliente Rail Line in the draft Rail Alignment EIS.<sup>48</sup> Nevada does not maintain that the cost estimates in the Application are incorrect or that DOE cannot afford to construct, operate and maintain the Caliente Rail Line in light of the Application's estimates.
- Nevada also complains that the draft Rail Alignment EIS does not update costs for the Carlin, Jean, and Valley Corridors.<sup>49</sup> The draft Rail Alignment EIS, however, concerns just the Caliente Corridor and, as a tiered EIS, it did not need to address the other corridors. Nevada also does not substantiate why cost figures for those other corridors bear on DOE's financial ability to construct, maintain and operate the Caliente Rail Line.<sup>50</sup>
- Nevada questions the cost figures in a *draft* DOE National Transportation Plan.<sup>51</sup> That document, however, is not part of the Application and is not in the record. Also, that draft, which has an estimate in 2006 dollars that is less than the 2008

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<sup>48</sup> July 15, 2008 Comments of State of Nevada at 51-53

<sup>49</sup> July 15, 2008 Comments of State of Nevada at 51

<sup>50</sup> DOE additionally notes that in the Nevada Rail Corridor SEIS, DOE used the more advanced Caliente rail alignment design and plans for updating estimates of potential environmental impacts for the Carlin, Jean and Valley Modified Corridors. To do that, DOE used primary impact indicators (*i.e.*, parameters that describe alignment characteristics, such as length and earthwork quantities) from the Caliente rail alignment design and plans, and calculated ratios to estimate data for the other corridors. That analysis reflected updated cost estimates based on the comparative scaling and ratios. *See* final Rail Corridor SEIS at 5-23

<sup>51</sup> July 15, 2008 Comments of State of Nevada at 51. The Timbisha-Shoshone Tribe raises the same question. July 8, 2008 Comments of Timbisha-Shoshone Tribe at 4

dollar estimate in the Application, has no bearing on DOE's ability to afford the higher estimate

- Nevada also asks rhetorically whether “there is some cost threshold where construction cost would become the major factor in selecting the preferred rail corridor” and whether there is “some cost threshold for rail access that would trigger a reconsideration of the preferred transportation mode”<sup>52</sup> Those questions are facially irrelevant. They offer no ground for the Board to conclude that DOE lacks the requisite financial ability to construct the Caliente Rail Line

Finally, Nevada questions whether Congress will approve expenditures from the Nuclear Waste Fund to construct the Caliente Rail Line.<sup>53</sup> This comment calls upon the Board to speculate that Congress might change federal policy or otherwise not fund the mode of transportation it authorized DOE to select. The Board cannot engage in such speculation to forego its obligation to grant DOE a certificate of public convenience and necessity.<sup>54</sup>

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<sup>52</sup> July 15, 2008 Comments of State of Nevada at 53

<sup>53</sup> *Id.* at 49

<sup>54</sup> See, e.g., *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 551, 98 S. Ct. 1197-1215 (1978) (agency not required to consider as part of environmental review “speculative possibilities” that would require basic changes in statutes and policies), quoting *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 837 (D.C. Cir. 1972) (“We do not suppose Congress intended an agency to devote itself to extended discussion of the environmental impact of alternatives so remote from reality as to depend on, say, the repeal of the antitrust laws”), see also *Tongue River III*, 2007 WL 2936132 at \*10 (declining to find that applicant lacked financial ability because of speculation that financial institutions may not provide funds for construction)

## **B. Public Demand**

“[T]he burden is on opponents to establish that a proposal is inconsistent with the public interest because there is no public demand or need for the construction”<sup>55</sup> None of the comments meets this burden.

The need for transportation of spent nuclear fuel and high-level radioactive waste by rail, in fulfillment of DOE’s obligations under the NWPAA, provides the requisite public demand for the Caliente Rail Line, as no existing rail line serves the Yucca Mountain repository site. The support of the nuclear power industry corroborates that demand<sup>56</sup>

There also will be commercial use of the Caliente Rail Line. As set forth in the Application, DOE estimates that there will be approximately 8 train shipments per week (222 carloads) of commercial freight demand along the Caliente Rail Line<sup>57</sup> The support of the localities in which the Caliente Rail Line will be located, and which will benefit from common carriage on the Caliente Rail Line, corroborates that demand

Seeking to establish a lack of demand, some of the parties question DOE’s selection of the mostly rail scenario nationally and in Nevada. They argue that alternative transportation modes, such as heavy haul trucks, can be used in lieu of rail to transport spent nuclear fuel and high-level radioactive waste to Yucca Mountain.<sup>58</sup>

That is not a proper challenge to the Application. DOE is authorized under the NWPAA to select the mode of transporting spent nuclear fuel and high-level radioactive

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<sup>55</sup> *Norfolk Southern*, 2003 WL 21132522 at \*5

<sup>56</sup> *Great Salt Lake*, 2000 WL 1844695 at \*5 (finding public demand and interest in application to construct rail line to private storage facility for spent nuclear fuel based on support of nuclear power industry)

<sup>57</sup> Application at 16-18

<sup>58</sup> July 15, 2008 Comments of State of Nevada at 43-47, July 8, 2008 Comments of Timbisha-Shoshone Tribe at 3

waste to the Yucca Mountain repository.<sup>59</sup> Section 119(a)(1) of the NHPA directs that the United States courts of appeals “shall have original *and exclusive* jurisdiction over any civil action” for review of any final decision or action of DOE under the NHPA.<sup>60</sup> Any such challenge must be commenced within 180 days of DOE’s final decision or action.<sup>61</sup>

As mentioned, DOE issued its Record of Decision selecting the “mostly rail” alternative on April 8, 2004.<sup>62</sup> Pursuant to the NHPA, any challenge to that decision was required to be commenced in an appropriate court of appeals within 180 days of the decision, or be forever barred. Given the exclusive and original jurisdiction of the court of appeals, the Board does not have authority to review that decision and cannot second guess DOE’s selection of the “mostly rail” alternative.

Indeed, Nevada has already litigated, and lost, its challenge to DOE’s selection. In September 2004, the State of Nevada filed a petition for review with the United States Court of Appeals for the District of Columbia Circuit, pursuant to Section 119 of the NHPA, seeking review of DOE’s April 8, 2004 Record of Decision and the transportation-related portions of the Yucca Mountain FEIS on which it is based. Nevada claimed in that petition that “in selecting a national transportation mode and Nevada rail corridor for the movement of waste to Yucca, DOE violated NEPA and NEPA

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<sup>59</sup> 42 U.S.C. § 10132(a), § 10155(c)(2)(A)(vii)

<sup>60</sup> 42 U.S.C. § 10139(a)(1) (emphasis added)

<sup>61</sup> 42 U.S.C. § 10139(c)

<sup>62</sup> See pages 7-8 above



implementing regulations,” and acted in an arbitrary and capricious manner and contrary to law<sup>63</sup>

In its decision, the D.C. Circuit denied Nevada’s petition and rejected its claims on the merits. The Court held that DOE met its obligations under 40 C.F.R. § 1503.1(a)(2) regarding consultation with other agencies, that DOE appropriately tiered its proposed action analyses under 40 C.F.R. § 1508.28; that DOE took the “requisite hard look” at the potential rail corridor environmental impacts and that “DOE’s analysis of the environmental impacts of rail corridor selection in its FEIS is adequate,” and that DOE’s “selection of the Caliente Corridor therefore was not arbitrary or capricious.”<sup>64</sup> The Court summarily denied Nevada’s remaining claims.<sup>65</sup>

The D.C. Circuit’s decision is *res judicata* of any challenge by Nevada to DOE’s decision to select the “mostly rail” option. The Board should not allow Nevada, or any other party, to re-litigate that decision in this proceeding.

Nevada’s comments directed to the intended uses of the Caliente Rail Line are equally misplaced. Nevada speculates that the number of shipments of spent nuclear fuel and high-level radioactive waste on the Caliente Rail Line could be higher than DOE projects.<sup>66</sup> In addition to being conjectural, Nevada’s contention does not demonstrate a

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<sup>63</sup> *State of Nevada v. Department of Energy*, Petitioner’s Final Opening Brief at 2-4. Yet, Nevada’s brief also stated that “DOE selected its ‘mostly rail’ option for what appear to be sound reasons, which is why, in comments on the draft EIS, Nevada supported this option as the preferred alternative.” *Id.* at 30. See also 69 Fed. Reg. 18561 (April 8, 2004) (“In these comments, the state indicated that DOE should plan its transportation system to maximize the use of rail.”)

<sup>64</sup> *State of Nevada v. Department of Energy*, 457 F.3d 78, 89-93 (D.C. Cir. 2006).

<sup>65</sup> *Id.* at 94, n.10.

<sup>66</sup> July 15, 2008 Comments of State of Nevada at 35.

lack of public demand. It means only that there could be an even greater need for the Caliente Rail Line.

Nevada also avers that “[t]he purported economic benefits to existing businesses are speculative.”<sup>67</sup> That argument reverses the law. “[T]he burden is on the opposition to establish that a proposal is inconsistent with the public interest because there is no public demand or need for construction . . . .”<sup>68</sup>

Nevada and the other parties have not met that burden. Nevada speculates that without the Caliente Rail Line, there “could” be opportunities for transportation of local goods by legal-weight truck and the “potential” for improvements in local highway infrastructure.<sup>69</sup> Speculation about such possibilities does not establish that there is no public demand or need for the Caliente Rail Line.

### **C. Public Interest/Harm To Existing Services**

Consistent with the pro-construction policy under current law, “rail construction is presumed to be in the public interest.”<sup>70</sup> Further, there are no rail services in the part of Nevada that the Caliente Rail Line will serve. The Caliente Rail Line thus will not harm any existing rail services.<sup>71</sup>

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<sup>67</sup> *Id.* at 48.

<sup>68</sup> *Norfolk Southern*, 2003 WL 21132522 at \*5.

<sup>69</sup> *Id.*

<sup>70</sup> *Norfolk Southern*, 2003 WL 21132522 at \*5.

<sup>71</sup> *Great Salt Lake*, 2000 WL 1844695 at \*5 (“because this is a new facility and service, the issue of whether the proposed operation would harm existing rail services is not applicable here.”). One party, Nevada Central Railroad (“NCR”), complains that the Caliente Rail Line will interfere with its plans. *See* April 8, 2008 Comments of Nevada Central Railroad at 3. However, NCR does *not* own or operate any rail line. *See, Nevada Central Railroad--Exemption for Acquisition and Operation of Rail Service--in Elko and White Pine Counties, NV*, STB Finance Docket No. 34773, 2005 STB LEXIS 572 (STB served Nov. 22, 2005) (denying NCR’s notice to acquire and operate a common carrier line and describing NCR as a “noncarrier”).

One party, Twin Springs Ranch, complains that the Caliente Rail Line will bisect BLM land upon which BLM has granted grazing rights to Twin Springs Ranch<sup>72</sup> Others are concerned more generally about the potential impact on grazing rights<sup>73</sup> Those concerns are unfounded, however, because DOE has proposed mitigation to minimize and offset disruption to grazing The affected localities agree that potential impact to grazing “may be avoided or minimized through design and implementation of appropriate mitigation measures”<sup>74</sup>

Equally important, the Board’s determination of public convenience and necessity is not based on potential impacts to a single person or a single interest The Board’s consideration is broader in scope

Here, the entire Nation will benefit from the Caliente Rail Line The Caliente Rail Line will enable DOE to safely and securely transport the Nation’s spent nuclear fuel and high-level radioactive waste to Yucca Mountain. That will further the public interest in national security, non-proliferation, energy security, homeland security, and protection of human health and environment.<sup>75</sup>

Local communities will also benefit from the Caliente Rail Line. The Caliente Rail Line would provide rail service to the communities of Panaca, Caliente, Tonopah, Goldfield, and Beatty With the exception of Caliente, the other communities do not have rail service As detailed in the Application, the Caliente Rail Line will provide new

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<sup>72</sup> July 14, 2008 Comments of Twin Springs Ranch at 1

<sup>73</sup> *E.g.*, July 11, 2008 Comments of N-4 State Grazing Board at 2-9

<sup>74</sup> July 10, 2008 Comments of White Pine County at 2

<sup>75</sup> *See generally* Application at § 1150 4(c) (public convenience and necessity factors supporting the proposal)

employment opportunities to those areas, it will bring increased business and opportunities for local businesses, and it will have a positive socioeconomic impact on the local economy and tax base.<sup>76</sup> All those factors strongly support a finding that approval of the Application is in the public interest

## **V. ENVIRONMENTAL REVIEW**

Appendix A to this Reply summarizes the parties' technical comments on environmental matters, along with DOE's responses to those comments. Most of those comments repeat comments submitted on the draft Nevada Rail Corridor SEIS and draft Rail Alignment EIS, and DOE already responded to them in the final Nevada Rail Corridor SEIS and final Rail Alignment EIS. DOE's response in Appendix A provides cross-references to the applicable portions of the Nevada Rail Corridor SEIS and Rail Alignment EIS where DOE addressed those matters. Other issues that the parties raise concerning the Board's environmental review are summarized below.

### **A. Additional Public Comment Period**

Nevada contends that the Board must conduct its own public comment process as part of its environmental review.<sup>77</sup> Nevada's contention is incorrect.

The Board stated in its April 10, 2008 Decision on Notice of Construction and Operation and Adoption of Procedural Schedule ("Notice Decision"), served April 11, 2008, that the Nevada Rail Corridor SEIS and Rail Alignment EIS (including the public comments) "will serve as the basis for SEA's recommendation to the Board regarding whether from an environmental perspective, DOE's construction and operation application

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<sup>76</sup> Application at 28-30

<sup>77</sup> July 15, 2008 Comments of State of Nevada at 56

should be granted, denied, or granted with environmental conditions.” The Board was a cooperating agency in the preparation of the Nevada Rail Corridor SEIS and Rail Alignment EIS, and as summarized in the Background Section above,<sup>78</sup> the preparation of those documents entailed extensive public outreach activities to give interested parties, agencies, States, localities, Tribes, organizations, and the general public the opportunity to learn about the project, define issues, and actively participate in the review process.

The Board is not required to conduct another public comment period on those NEPA documents. As the Board has recognized, CEQ rules “direct agencies to reduce duplication” in environmental reviews.<sup>79</sup> To reduce duplication, those regulations provide that a single lead agency can take primary responsibility for the preparation of an EIS and that other cooperating agencies can collaborate in and rely upon that EIS. If a cooperating agency participated in scoping decisions and other aspects of the environmental review process, that agency is “fully entitled to rely on the FEIS.”<sup>80</sup>

A cooperating agency’s only obligation in that circumstance is to perform an independent review of the EIS. If the agency conducts that review and determines that “its comments and suggestions have been satisfied,” the agency can adopt the EIS without recirculating it.<sup>81</sup>

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<sup>78</sup> See pp. 5-10 above.

<sup>79</sup> *Tongue River III*, 2008 WL 676490 at n. 28.

<sup>80</sup> *Hammond v. Norton*, 370 F. Supp. 2d 226, 261 (D.C. Cir. 2005). *Accord*, *Silentman v. Federal Power Commission*, 566 F.2d 237 (D.C. Cir. 1977) (a cooperating agency does not have to prepare a full environmental impact statement for the project; it can rely on the statement prepared by a lead agency so long as it has taken into account the environmental costs of the project. It can do this by accepting, rejecting, or modifying the analysis of the lead agency).

<sup>81</sup> 40 C.F.R. § 1506.3(c).

Nevada does not identify any way in which the Nevada Rail Corridor SEIS and the Nevada Rail Alignment EIS fail to satisfy concerns pertinent to this Board. Moreover, Nevada has had full opportunity to comment on those documents. Nevada provided comments on the draft Nevada Rail Corridor SEIS and the draft Rail Alignment EIS. Nevada also could have provided comments on the final versions of those documents but did not submit any comments.<sup>82</sup> Further, Nevada was on notice that the Board intended to rely on the Nevada Rail Corridor SEIS and Rail Alignment EIS, and Nevada had the final versions of those documents before it commented on the Application. Nevada, therefore, could have included in its comments to this Board any comments on the final NEPA documents. In light of the numerous comment opportunities, the Board should follow CEQ regulations and adopt those NEPA documents without further public comment.

#### **B. National Transportation Impacts**

Some parties advocate that the Board must analyze the potential environmental impacts of transporting spent nuclear fuel and high-level radioactive waste outside the Caliente Corridor.<sup>83</sup> However, those impacts are not properly before the Board. Congress authorized DOE to select the mode of transporting spent nuclear fuel and high-level radioactive waste nationwide, and DOE considered in the Yucca Mountain FEIS the potential environmental impacts associated with various modes of transportation, including

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<sup>82</sup> The deadline for providing comments on the final Nevada Rail Corridor SEIS and the final Rail Alignment EIS was August 11, 2008. See 40 C.F.R. § 1506.10(a)-(b) (comments on final EIS due within 30 days of EPA's announcement that EIS is available). Nevada did not submit any comments on either the final Nevada Rail Corridor SEIS or the final Rail Alignment EIS by August 11, 2008.

<sup>83</sup> *E.g.*, July 15, 2008 Comments of State of Nevada at 15-20, July 9, 2008 Comments of Churchill County at 1.

rail.<sup>84</sup> The Application concerns only the Caliente Rail Line, and thus the Board's environmental review is properly limited to the potential impacts of that line.

The Supreme Court's decision in *Department of Transportation v Public Citizen*, 541 U S 752 (2004), is instructive on this issue. There, the Supreme Court held that "where an agency has no ability to prevent a certain effect due to its limited statutory authority over the relevant actions, the agency cannot be considered a legally relevant 'cause' of the effect."<sup>85</sup> The Supreme Court also noted that a party raising a NEPA challenge must prove that the proposed agency action under review proximately caused an alleged effect such that the agency must analyze it under NEPA.<sup>86</sup>

Based on those precepts, the Supreme Court held in *Public Citizen* that the Department of Transportation ("DOT") had no duty under NEPA to prepare an environmental assessment on the effects of Mexican trucks using American highways because the authority to allow Mexican trucks into the United States rested only with the President. *Id.* at 764-66. Stated another way, "pollution from Mexican motor carriers was not an 'effect' that the DOT had to consider because no 'action' by the DOT would 'cause' Mexican motor carriers to enter the United States."<sup>87</sup>

Similarly, the potential environmental impacts of national transportation are not a matter the Board has to consider in its analysis of the Caliente Rail Line because responsibility over national transportation rests with DOE. As a matter of law, the Board's

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<sup>84</sup> 42 U.S.C. § 10155(c)(2)(A)(vii)

<sup>85</sup> *Public Citizen*, 541 U.S. at 770

<sup>86</sup> *Id.* at 767. Accord, *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 736, 744 (1983)

<sup>87</sup> *City of Shoreacres v. Waterworth*, 420 F.3d 440, 452 (5th Cir. 2005), citing *Public Citizen*, 541 U.S. at 764-66

actions in this proceeding cannot proximately cause an environmental impact associated with transporting spent nuclear fuel and high-level radioactive waste nationwide. Under *Public Citizen* the Board is not required to consider those effects

### **C. Highway Transport**

Clark County contends that the draft Rail Alignment EIS did not address impacts associated with highway transport of nuclear waste.<sup>88</sup> DOE was not required to consider those impacts in that document, and the Board does not need to consider them in connection with its review of the Application. DOE analyzed truck transportation modes in the Yucca Mountain FEIS, and under DOE's tiered review, other transportation modes were not required to be reviewed in the Rail Alignment EIS. Consequently, the no-action alternative for the Rail Alignment EIS appropriately assumed maintenance of the status quo, and discussion of impacts associated with other modes was not necessary.<sup>89</sup>

### **D. Terrorism/Sabotage**

Nevada argues that the Application does not sufficiently consider terrorism and sabotage as required by *San Luis Obispo Mothers for Peace v NRC*, 449 F.3d 1016 (9th Cir 2006), *cert denied*, 127 U S 1124 (2007).<sup>90</sup> Nevada is incorrect.

The court in *San Luis Obispo* held that in the circumstances of the agency decision under review, "the environmental impact of terrorist attacks" had to be considered to

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<sup>88</sup> July 15, 2008 Comments of Clark County at 5

<sup>89</sup> DOE notes additionally that although it did not re-evaluate the mostly legal weight truck alternative after the April 8, 2004 Record of Decision for the "mostly rail" mode, DOE did update the transportation impacts associated with the use of trucks on national and Nevada highways under the mostly rail scenario in the Yucca Mountain Repository Supplemental Environmental Impact Statement ("Yucca Mountain Repository SEIS") See Yucca Mountain Repository SEIS, Chapter 6. A copy of the Yucca Mountain Repository SEIS is included as Appendix F hereto

<sup>90</sup> July 15, 2008 Comments of the State of Nevada at 60



satisfy the NEPA reasonableness review 449 F.3d at 1035. Here, DOE considered “the environmental impact of terrorist attacks” as part of both the draft and final Rail Alignment EIS.<sup>91</sup> That analysis specifically included estimated consequences of terrorist attacks, in compliance with the holding in *San Luis Obispo*.

Certain of the comments contend that DOE must go beyond the consideration of the environmental effects of a terrorist attack. They contend that DOE must develop “credible threat packages to enhance capabilities to prevent, protect, respond and recover” and that “[t]hreat evaluation requires comprehensive threat assessments specific to the proposed high-level nuclear waste shipments.”<sup>92</sup> DOE places the highest priority on the protection of spent nuclear fuel and high-level radioactive waste in transit and will implement appropriate measures to safeguard the transit of such materials. But as the Board indicated in *San Jacinto Rail Ltd and the Burlington Northern and Santa Fe Railway Co., Construction and Operation of a Rail Line from the Bayport Loop in Harris County, Texas*, the Board’s environmental review obligation for a certificate of public convenience and necessity is limited to the environmental impacts of a terrorist attack.<sup>93</sup> In *San Jacinto*, the Board held that by considering the potential consequences of a catastrophic event resulting in the release of the entire contents of a loaded rail car, the EIS

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<sup>91</sup> The draft Rail Alignment EIS discussed terrorism, sabotage, and exposure with respect to the Caliente Rail Alignment at pp 4-313 to 4-316, with additional supporting information in Appendix K at K-51 to K-63. Appendix L discussed security and first response. The final Rail Alignment EIS discussed terrorism, sabotage, and exposure regarding the Caliente rail alignment at pages 4-344 to 3-351, with additional supporting information in Appendix K at K-65 to K-67. Appendix L also discussed security and first response.

<sup>92</sup> July 15, 2008 Comments of Clark County at 6.

<sup>93</sup> STB Finance Docket No. 34079, 2003 WL 21516137 (S.T.B. May 2, 2003).

“encompass[ed] those of a terrorist event” and satisfied the “environmental review process.”

As in *San Jacinto*, DOE satisfied the environmental review process by considering the potential consequences of terrorist events in the Rail Alignment EIS. The other security-related issues the parties raise are directed to issues not pertinent to the Application

Also misplaced are the comments of Nevada, Clark County and the Tribe regarding proposed rulemaking by the Federal Railroad Administration (“FRA”).<sup>94</sup> Those proposed rules are still pending and thus are not current law<sup>95</sup> Equally important, the proposed rules would not apply to the Board’s public convenience and necessity determinations They concern certain recordkeeping and oversight by the FRA which are not pertinent to the Application

In this regard, Clark County emphasizes § 209.501 of the proposed regulations.<sup>96</sup> That proposed rule would not impose any substantive limitations on the approval of a new rail line by this Board Rather, it would entitle an operating carrier to notice and reasons for the FRA’s decision that the carrier’s route selection, analysis and documentation under the new regulations are deficient That proposed regulation has no bearing on the Application

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<sup>94</sup> July 15, 2008 Comments of Clark County at 6-7, July 15, 2008 Comments of State of Nevada at 59, July 8, 2008 Comments of Timbisha-Shoshone Tribe at 4

<sup>95</sup> 73 Fed Reg 20774 (April 16, 2008)

<sup>96</sup> July 15, 2008 Comments of Clark County at 7

Nevada's comments about the NRC's proposed rulemaking on transportation security are similarly misplaced.<sup>97</sup> As a legal matter, the sufficiency of NRC's transportation regulations is outside the scope of the Board's review of the Application. As a factual matter, Nevada wrongly implies that the rulemaking evinces NRC's determination that its regulations are inadequate. As stated in the NRC staff's memorandum responding to the National Academies' study on spent nuclear fuel transport, "[NRC] staff concludes that current security measures and standards put in place since September 11, 2001, are adequate for the protection of spent fuel and high level waste transportation even in the event of increased shipping campaigns."<sup>98</sup> The public record shows that NRC has not proposed its rulemaking because it considers its standards inadequate, but to embody its standards in regulations that afford an opportunity for public review and comment, rather than continue with the security advisories and the inclusion of security measures in licensee orders which it has used since September 11, 2001.

#### **E. Mitigation**

The parties have requested various mitigation measures. DOE already has proposed to address most of that mitigation through implementation of best management practices and measures, and establishment of one or more Mitigation Advisory Board(s). Some of the parties' proposed measures, however, are inappropriate, and DOE cannot agree to them.

Appendix B to this Reply identifies the mitigation requested by the parties and DOE's response to those requests. Where applicable, DOE has identified in its response

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<sup>97</sup> July 15, 2008 Comments of State of Nevada at 58

<sup>98</sup> SECY-07-0095 at 5 (Appendix C hereto)

which mitigation proposals can be addressed through what it already has proposed, and which are inappropriate. An overview description of DOE's proposed approach to mitigation follows below.

In its April 8, 2004 Record of Decision,<sup>99</sup> DOE committed to implementing measures to avoid or minimize harm related to the shipment of spent nuclear fuel and high-level radioactive waste, identified specific measures, and committed to follow current and future DOT and NRC transportation rules. DOE also committed to consult with states, Native American tribes, local governments, utilities, the transportation industry, and other interested parties in a cooperative manner to refine the transportation system as it is developed.

In Chapter 7 of the final Rail Alignment EIS, DOE identifies preliminary best management practices and mitigation measures that represent the initial step in an iterative process to further develop and eventually implement these practices and measures. The preliminary best management practices and mitigation measures would be further developed and detailed through (1) the regulatory compliance process, such as that associated with this Application and DOE's right-of-way application to the BLM, (2) development of the final design and associated specifications, such as the selection of specific seed mixes and application techniques for reclaiming disturbed land, and (3) consultation with directly affected parties, such as grazing permittees and local communities through which the Caliente Rail Line would pass.

DOE would undertake this mitigation process in consultation with federal, state, and local regulatory authorities having jurisdiction over the construction and operation of

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<sup>99</sup> 69 Fed. Reg. 18557 (April 8, 2004).

the railroad, and in consultation with directly affected parties. To that end, DOE would constitute one or more Mitigation Advisory Board(s) to assist DOE, this Board, and the BLM in developing, implementing, and monitoring best management practices and mitigation measures during the construction and operation of the Caliente Rail Line. The STB has accepted such boards as appropriate mitigation in construction authorizations.<sup>100</sup>

Further, DOE would conduct an ethnographic evaluation of the rail alignment area to develop a cultural resources management program. DOE would propose that the Consolidated Group of Tribes and Organizations<sup>101</sup> assist in the ethnographic evaluation, and in the development and implementation of best management practices and mitigation measures.

In Appendix F of the final Rail Alignment EIS, DOE identifies preliminary measures to mitigate the potential adverse impacts of actions in a floodplain or wetlands, including but not limited to, minimum grading requirements, runoff controls, design and construction constraints, and protection of ecologically sensitive areas. DOE would avoid disturbing floodplains and wetlands and would minimize impacts to the extent practicable, if avoidance is not possible. In general, DOE would minimize impacts to floodplains and wetlands through the implementation of engineering design standards and best management practices. DOE would design the rail alignment to avoid potential direct and indirect impacts to water resources wherever practicable.

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<sup>100</sup> *Tongue River III*, 2007 WL 2936132 (Oct. 2007) (Mitigation Measure 14) (approving creation of a Multi-Agency/Railroad Task Force to approve the implementation and monitoring of certain mitigation measures).

<sup>101</sup> DOE maintains a Native American Interaction Program. As part of this Program, 17 tribes and organizations have formed the Consolidated Group of Tribes and Organizations, which consists of appointed tribal representatives responsible for presentation of their respective tribal concerns and perspectives to DOE.

Due to the nature of rail line design and the construction activities that would be required to implement the design, the rail line cannot avoid crossing floodplains or wetlands. The engineering design process would ensure, however, that the engineered structures used to pass water runoff from one side of the rail line to the other will do so in a way that would minimize impacts to floodplains and wetlands. Such impacts would be limited mostly to the construction phase, which would be subject to Clean Water Act regulations. In most cases, DOE would minimize potential adverse impacts through the implementation of best management practices in concert with the permits and plans regulatory agencies will require.

DOE would implement a wetlands compensatory mitigation plan that would meet the requirements of the Environmental Protection Agency ("EPA") for mitigating losses of aquatic resources.<sup>102</sup> As specified in the EPA's comment letter of August 11, 2008, this plan would include one of the following options to compensate for the loss of wetlands: (1) restore or create three acres of wetlands of equivalent function within the watershed for every acre of wetlands filled to construct the railroad, (2) restore or create one acre of wetlands of equivalent function within the watershed, and remove non-native plants in five acres within the watershed for every acre of wetlands filled, or (3) restore or create one acre of wetlands of equivalent function in the watershed, and enhance five acres of riparian wetlands habitat in upper Meadow Valley, including Rainbow Canyon, for every acre of wetlands filled.<sup>103</sup> The compensatory mitigation plan would be developed and

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<sup>102</sup> 40 C.F.R. Part 230, Subpart J

<sup>103</sup> August 11, 2008 letter from EPA to Dr. Jane Summerson (attached hereto as Appendix D)

implemented in accordance with requirements of the EPA<sup>104</sup> and in coordination with the Army Corps of Engineers and the BLM

## **VI. OTHER ISSUES**

### **A. Through-Line Alternative**

Several parties request the Board to require DOE not to terminate the Caliente Rail Line at the Yucca Mountain repository, but to continue it to an existing Union Pacific Line in California<sup>105</sup> That is an inappropriate request The Board's duty is not to "second guess applicants or to choose between alternatives."<sup>106</sup> Its duty is solely to determine whether the "proposal submitted meets the statutory criteria."<sup>107</sup> The request for a through-line does not concern whether DOE's proposed line, as submitted, is inconsistent with public convenience and necessity It improperly asks the Board to second-guess DOE's routing decision and order construction of a rail line beyond what DOE has proposed. DOE notes, however, that nothing in principle prevents another entity from connecting a through-line to the Caliente Rail Line in the future if it desires and obtains all necessary regulatory authorizations.

### **B. Mina Corridor**

Various parties submitted inconsistent comments regarding the Mina Corridor. Some parties oppose construction of a rail line in that corridor.<sup>108</sup> Others support it and ask the Board to require DOE to perform additional consideration of such a route<sup>109</sup>

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<sup>104</sup> 40 C F R § 230.91 through § 230.97

<sup>105</sup> July 11, 2008 Comments of Lander County at 2, July 7, 2008 Comments of Nye County at 7-8

<sup>106</sup> *Louisville & Jefferson County Riverport Auth. & CSX Transp., Inc. -- Constr. & Operation Exemption--in Jefferson County, KY*, 41 C C 2d 749, 754 (1988)

<sup>107</sup> *Id.* at 758

<sup>108</sup> July 11, 2008 Comments of the State of California at 7

To be clear, DOE does not seek authorization to construct a rail line in the Mina Corridor. DOE identified the Mina Corridor as non-preferred in the final Rail Corridor SEIS because the Walker River Paiute Tribe objected to the transportation of nuclear waste across its reservation.<sup>110</sup> DOE seeks a Certificate of Public Convenience and Necessity for the Caliente Rail Line only.

Accordingly, the Board does not need to consider the Mina Corridor in connection with the Application. It also would be inappropriate under the Board's permissive jurisdiction to compel DOE to consider, much less construct, that alternative rail line.

### **C. Construction Time**

Nevada in its comments questions whether the Caliente Rail Line can be constructed in 10 years. This comment is internally inconsistent with another of its comments which acknowledges that 10 years is the upper bound of Nevada's estimate for construction of the Caliente Rail Line.<sup>111</sup> Regardless, Nevada does not contend, much less substantiate, that this issue has any bearing on the Board's public convenience and necessity determination.

### **D. Operating Data and Plan**

Nevada contends that the Application lacks the operating data and plan specified in 49 C.F.R. § 1150.5.<sup>112</sup> This repeats an argument from Nevada's Motion to Reject. The Board rejected Nevada's argument in denying that motion, and the grounds on which the Board relied remain fully applicable.

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<sup>109</sup> July 9, 2008 Comments of Nye County at 8-9, July 10, 2008 Comments of Mineral County at 1.

<sup>110</sup> See page 10 above.

<sup>111</sup> July 15, 2008 Comments of State of Nevada at 48 ("Nevada estimates that it would likely take 7 to 10 years to construct the rail line.")

<sup>112</sup> *Id.* at 49-50.



- The Board's regulations do not require an applicant to have selected an operator in order to obtain construction authorization, and the Board has granted construction applications where the operator of the proposed line has not been determined.<sup>113</sup>
- It is reasonable that DOE has not submitted a detailed operating plan because DOE had not yet engaged in the formal procurement process to choose a contractor to provide that service
- DOE has provided the operating data that can feasibly be presented prior to selection of an operator.
- A detailed operating plan is less important here than in a typical public convenience and necessity application. For an application submitted by a private party, the operating plan helps the Board assess whether the applicant has the financial ability to undertake its proposed obligations. That concern is not present here because the Federal Government is the applicant and no other rail operations are potentially put at financial risk by the Caliente Rail Line.<sup>114</sup>

Nevada's comments do not dispute the Board's reasoning. They also do not substantiate how the absence of operating data is material to the Board's present decision. The Board correctly held that DOE was not required to submit a detailed operating plan as

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<sup>113</sup> For examples of construction applications that were approved where the operating carrier was not yet determined, see *Tongue River Railroad Company, Inc --Construction and Operation--Western Alignment*, STB Finance Docket No. 30186 (Sub-No. 3) (STB served Oct. 11, 2007), *Southern Electric Railroad Company--Construction Exemption--Jefferson County, AL*, Finance Docket No. 31972 (not printed) (served March 17, 1992) at 2.

<sup>114</sup> June 27, 2008 Decision at 4.

part of the Application, and the absence of such a plan likewise provides no basis for determining that the Caliente Rail Line is inconsistent with the public convenience and necessity. As the Board noted in its decision denying Nevada's Motion to Reject, DOE will provide the additional operating data after it has selected an operator.<sup>115</sup>

#### **E. Safety Integration Plan**

Nevada also complains that DOE did not submit a Safety Integration Plan ("SIP") with the Application.<sup>116</sup> This repeats yet another unsuccessful argument that Nevada made in its Motion to Reject.

The Board rejected that argument in denying the Motion to Reject. As the Board stated in its Decision denying that motion, "the Board requires SIPs for consolidations under 49 U.S.C. 11323(a), and not for line constructions under 49 U.S.C. 10901. The requirement is to ensure that work forces and operations are safely unified as part of a large merger transaction, and there will be no consolidation of work forces or operations as a result of the proposed transaction."<sup>117</sup>

The Board's interpretation of its SIP regulations is correct and dispositive, and Nevada offers no ground for its reconsideration. Indeed, Nevada does not even contend that a SIP is necessary for the Board's public convenience and necessity determination. The Board should reject again Nevada's baseless request for a SIP.

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<sup>115</sup> *Id*

<sup>116</sup> July 15, 2008 Comments of State of Nevada at 56-57

<sup>117</sup> June 27, 2008 STB Decision at 6

#### **F. Identification of Applicable State Statutes**

Nevada argues that the Application does not identify state statutes generally applicable to DOE, allegedly in violation of 49 C F R. § 1150.3(e) <sup>118</sup> That argument is baseless. Section 1150.3(e) is part of the Board's regulations concerning "information about applicants" and directs an applicant to identify "Date and place of organization, applicable state statutes, and a brief description of the nature and objective of the organization."<sup>119</sup>

That regulation does not seek a catalogue of every state law that might apply to an applicant. The context clearly indicates that it seeks the governing state law under which an applicant is organized. That is not pertinent to a federal agency like DOE.

#### **G. Caliente Request for Intermodal Facility**

The City of Caliente requests that the Board impose a condition requiring DOE to construct "one or more intermodal facilities within the City of Caliente" <sup>120</sup> It would be inappropriate for the Board to impose that condition. The City makes no showing that the requested intermodal facilities are necessary and appropriate to mitigate potential environmental impacts of the Caliente Rail Line. The City says in conclusory fashion that intermodal facilities would "reduce the chances of shipments of high-level radioactive waste sitting in the City of Caliente awaiting resolution of the inevitable rail issues that will occur" <sup>121</sup> However, as described in the Application, trains carrying casks of spent nuclear fuel and high-level radioactive waste would depart the Union Pacific

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<sup>118</sup> July 15, 2008 Comments of State of Nevada at 24

<sup>119</sup> 49 C F R. § 1150.3(e)

<sup>120</sup> July 1, 2008 Comments of City of Caliente at 2

<sup>121</sup> *Id.* at 1-2

Railroad Mainline and proceed along the Caliente Rail Line “to a Staging Yard north of Caliente.”<sup>122</sup> Thus, shipments of spent nuclear fuel and high-level waste will not be “sitting” in Caliente

#### **H. CSXT Request for Dedicated Trains**

CSX Transportation, Inc (“CSXT”) “does not take a position on the merits of” the Application,<sup>123</sup> but it does make a request. It asks the Board to require that all shipments of spent nuclear fuel tendered to CSXT by DOE for transportation to Yucca Mountain as the ultimate destination “be required to move in dedicated trains.”<sup>124</sup> Notably, the requested condition would not apply to the Caliente Rail Line, but to CSXT rail lines.

Like that of the City of Caliente, CSXT’s request seeks a condition that it would be inappropriate for the Board to order. CSXT’s request concerns purported effects outside the Caliente Corridor and is not properly part of the Board’s environmental review of the Application.

Though it would be inappropriate for the Board to impose the condition CSXT requests, DOE notes that it has adopted a policy to use dedicated trains as the usual mode of rail service for shipment of spent nuclear fuel and high-level radioactive waste to the Yucca Mountain repository.<sup>125</sup> That policy largely addresses CSXT’s concern.

#### **I. Timbisha Shoshone Tribe Funds**

The Native Community Action Council (“NCAC”) asserts that the Timbisha Shoshone Tribe has not received sufficient funding as an “affected Indian tribe” to conduct

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<sup>122</sup> Application at 34

<sup>123</sup> July 15, 2008 Comments of CSXT at 1

<sup>124</sup> *Id.* at 1-2

<sup>125</sup> Department of Energy Policy Statement for Use of Dedicated Trains for Waste Shipments to Yucca Mountain at 1 (attached hereto as Appendix E)

adequate oversight regarding transportation issues<sup>126</sup> Notably, the Tribe, which the Department of the Interior did not recognize as an affected tribe until July, 2007, makes no such complaint in its comments.<sup>127</sup> The NCAC's comment does not bear on the Board's public convenience and necessity determination or its environmental review

#### **J. Cultural Triage**

Equally misplaced is NCAC's argument that DOE used "cultural triage" to forgo "consideration of resistance by Native American stakeholders" during the site characterization and selection process for the Yucca Mountain repository site<sup>128</sup> While DOE disputes NCAC's characterization, this is not the forum to address its argument This proceeding concerns solely DOE's Application for a certificate of public convenience and necessity for the Caliente Rail Line, and does not concern the process used to select Yucca Mountain as a repository site.

#### **VII. ORAL HEARING**

Three of the parties request an oral hearing.<sup>129</sup> The Board should deny those requests. These parties do not explain why a hearing is necessary and why they did not include in their comments any information that they want to present to the Board One of them, Nye County, states that "there has been no substantive public policy debate on the overall issue of optimizing repository rail transportation in the State of Nevada."<sup>130</sup> That is

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<sup>126</sup> July 14, 2008 Comments of Native Community Action Council at 10

<sup>127</sup> See July 8, 2008 Comments of Timbisha-Shoshone Tribe, which do not raise the Tribe's funding as an issue

<sup>128</sup> July 15, 2008 Comments of Native Community Action Council at 10-11

<sup>129</sup> April 15, 2008 Letter of J Eastley, Chair, Nye County Board of County Commissioners at 2, April 15, 2008 Comments of Nye County at 2, July 8, 2008 Comments of Timbisha-Shoshone Tribe at 5, July 10, 2008 Comments of White Pine County at 6

<sup>130</sup> April 15, 2008 Letter of J Eastley, Chair, Nye County Board of County Commissioners at 2

neither a basis for a hearing nor factually accurate DOE held numerous public hearings in connection with its consideration of the mode of transportation, the rail corridor, and the rail alignment The Board's consideration of the Application is governed by well-defined and limited standards, and its review is not the occasion for the policy debate Nye County seeks

The record—which includes the Nevada Rail Corridor SEIS and Rail Alignment EIS—is extensive and provides more than sufficient information for the Board's review. All interested federal, state and local agencies, organizations, and members of the general public have had ample opportunity to comment on the Application, after a longer than normal review period They also have had ample opportunity to express their views during the scoping and comment periods on the Nevada Rail Corridor SEIS and Rail Alignment EIS The Board has the information it needs to review the Application, and no hearing is necessary <sup>131</sup>

## **VIII. CONCLUSION**

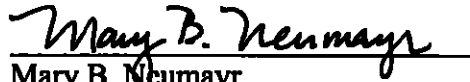
None of the comments submitted in opposition to DOE's Application demonstrate that the Caliente Rail Line is "inconsistent with the public convenience and necessity " Accordingly, DOE respectfully requests that the Board deny the requests for oral hearing and approve the Application.

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<sup>131</sup> See, *Tongue River III*, 2007 WL 2936132 at \*7 (denying request for oral hearing on application for certificate of public convenience and necessity in similar circumstances)

Dated this 29<sup>TH</sup> day of August, 2008

Respectfully submitted,

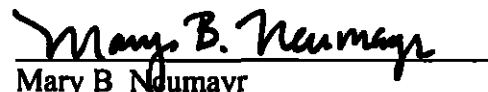
A handwritten signature in cursive script, reading "Mary B. Neumayr", is written over a horizontal line.

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**CERTIFICATE OF SERVICE**

I, Mary B Neumayr, hereby certify that I caused to be served true and correct copies of the Reply of the United States Department of Energy to Comments on its Application for a Certificate of Public Convenience and Necessity on each party of record on the attached list by first-class mail or more expedient service on this 29<sup>th</sup> day of August 2008

  
Mary B Neumayr  
Deputy General Counsel  
for Environment & Nuclear Programs

August 29, 2008



**UNITED STATES OF AMERICA**  
**BEFORE THE**  
**SURFACE TRANSPORTATION BOARD**

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**Finance Docket No. 35106**

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**UNITED STATES DEPARTMENT OF ENERGY**  
**--RAIL CONSTRUCTION AND OPERATION--**  
**CALIENTE RAIL LINE IN LINCOLN, NYE,**  
**AND ESMERALDA COUNTIES, NEVADA**

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**Finance Docket No. 35106**

**APPENDIX A**

**Technical Comments & Responses**

Appendix A  
Technical Comments & Responses

## INTRODUCTION

This Appendix addresses technical comments that parties submitted to the Surface Board regarding potential impacts of the Caliente Rail Line

DOE's responses in this Appendix refer to information from environmental impact by DOE. A list of these documents is provided below.

### DOE Environmental Impact Statements

Rail Alignment EIS	<i>Final Environmental Impact Statement for a Rail Alignment Construction and Operation of a Railroad in Nevada Repository at Yucca Mountain, Nye County, Nevada</i>
Repository SEIS	<i>Final Supplemental Environmental Impact Statement Repository for the Disposal of Spent Nuclear Fuel and Radioactive Waste at Yucca Mountain, Nye County, 0250F-S1, June 2008)</i>
Nevada Rail Corridor SEIS	<i>Final Supplemental Environmental Impact Statement Repository for the Disposal of Spent Nuclear Fuel and Radioactive Waste at Yucca Mountain, Nye County, Rail Transportation Corridor, DOE/EIS-0250F-SD</i>
Yucca Mountain FEIS	<i>Final Environmental Impact Statement for a Geological Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada (DOE/EIS-02</i>

The source document primarily used to respond to technical comments is the Rail Alignment EIS. Therefore, unless otherwise noted, references to sections and tables in DOE's responses refer to the Rail Alignment EIS.

DOE has previously filed electronic copies of the Rail Alignment EIS with the Board and can be viewed at the following link: [http://www.ocrwm.doe.gov/transport/draft\\_eis/in](http://www.ocrwm.doe.gov/transport/draft_eis/in). The Reference List for the Rail Alignment EIS contains Document Input Reference System numbers, presented sequentially, for each reference cited in the Rail Alignment EIS. Each reference in the Reference List can be accessed at [http://www.ocrwm.doe.gov/transport/draft\\_eis/rail\\_refs.shtml](http://www.ocrwm.doe.gov/transport/draft_eis/rail_refs.shtml). If a reference is marked as unavailable for viewing, a copy of the reference can be accessed through the Rail Alignment EIS available at the foregoing link, by double-clicking on the corresponding DIRS number. The Reference List for the Rail Alignment EIS comprises the Comment Response Document (CRD) for the Rail Alignment EIS.

DOE has previously filed electronic copies of the Nevada Rail Corridor SEIS with the Board and also can be viewed at the following link: [http://www.ocrwm.doe.gov/transport/draft\\_eis/nrc/](http://www.ocrwm.doe.gov/transport/draft_eis/nrc/). Volume 6 comprises the Comment Response Document (CRD) for the Nevada Rail Corridor SEIS. The Reference List for the Nevada Rail Corridor SEIS contains DIRS numbers, presented sequentially, for each reference cited in the Nevada Rail Corridor SEIS. The Reference List for the Nevada Rail Corridor SEIS comprises the Comment Response Document (CRD) for the Nevada Rail Corridor SEIS.

Technical Comments – Introduction

**Appendix A**  
**Technical Comments & Responses**

for each reference cited in the Nevada Rail Corridor SEIS. The Reference List can be accessed at [http://www.ocrwm.doe.gov/transport/draft\\_eis/rail\\_refs.shtml](http://www.ocrwm.doe.gov/transport/draft_eis/rail_refs.shtml). Unless demarcated in gray as unavailable for viewing, a copy of the reference can be accessed through the Nevada Rail Corridor SEIS available at the foregoing link, by double-clicking on the corresponding DIRS number.

DOE is filing electronic copies of the Repository SEIS with the Board with its Reply to the comments on its Application. A copy also can be viewed at the following link: [http://www.ocrwm.doe.gov/ym\\_repository/seis/index.shtml](http://www.ocrwm.doe.gov/ym_repository/seis/index.shtml). Volume 3 of the Repository SEIS comprises the CRD for the Repository SEIS. The Reference List contains DIRS numbers, presented sequentially, for each reference cited in the Repository SEIS. The Reference List can be accessed at [http://www.ocrwm.doe.gov/ym\\_repository/seis/repos\\_seis\\_refs.shtml](http://www.ocrwm.doe.gov/ym_repository/seis/repos_seis_refs.shtml). Unless demarcated in gray as unavailable for viewing, a copy of the reference can be accessed through the Repository SEIS available at the foregoing link, by double-clicking on the corresponding DIRS number.

To view the Yucca Mountain FEIS, including the CRD, the reader is directed to the following link: [http://www.ocrwm.doe.gov/documents/feis\\_2/index.htm](http://www.ocrwm.doe.gov/documents/feis_2/index.htm). Volume 3 of the Yucca Mountain FEIS comprises the CRD for the Yucca Mountain FEIS. The Reference List contains DIRS numbers, presented sequentially, for each reference cited in the Yucca Mountain FEIS.

Appendix A  
Technical Comments & Responses

**Subject:** Access to Public Lands

**Summary of Comment(s):** The counties of Lincoln and White Pine commented that access to public lands should be maintained during construction and operation of the rail line. They also raised the concern that the Department of Homeland Security restrictions may affect or impede access to public lands

**Response:** This issue was raised during the EIS comment and review process and DOE addressed this issue in the Rail Alignment EIS.

DOE has committed to maintaining access to existing private and county roads by providing grade crossings. Grade-separated crossings will be provided at highway crossings Table 2-22 lists proposed grade-separated crossings along the Caliente alignment (Section 2.2.2.5, page 2-73) DOE further expands on road crossing design in a Rail Alignment EIS supporting technical document (DIRS 182826 - Nevada Rail Partners 2007, page 6-9) where the use of active and passive warning systems is discussed At locations where several road crossings would occur in close proximity some minor rerouting and consolidation of crossings could occur but would not prevent crossing of the rail line. The regulatory authority to make decisions regarding roads, road closures, and rail line crossings rests with the BLM and county and local governments DOE would work in close consultation with these groups to ensure access is maintained.

As discussed in the CRD Section 3.6 2(1091) page CRD3-84, DOE does not anticipate Department of Homeland Security issues that would limit access to the service road; however, the DOE would have to comply with any new legislation that affected railroad operations and security

**Comment(s):**

***[Lincoln County]***

Access to public land in the vicinity of the Caliente Rail Alignment must be ensured during construction and operation of the line. Notwithstanding, DOE's stated intent to allow public access along and across the Caliente Rail Alignment to enable continued access to adjacent public lands, Lincoln County is concerned that Department of Homeland Security restrictions may impede access to public lands. STB is encouraged to require DOE to ensure that maintenance to public land is not in any way impeded by construction and operation of the Caliente Rail Alignment

***[White Pine County]***

Access to public land in the vicinity of the Caliente Rail Alignment must be ensured during construction and operation of the line. Notwithstanding, DOE's stated intent to allow public access along and across the Caliente Rail Alignment to enable continued access to adjacent public lands, White Pine County is concerned that Department of Homeland Security restrictions may impede access to public lands STB is encouraged to require DOE to ensure that maintenance to public land is not in any way impeded by construction and operation of the Caliente Rail Alignment

Appendix A  
Technical Comments & Responses

**Subject:** Aesthetics

**Summary of Comment(s):** The Timbisha Shoshone Tribe and the Dia Art Foundation stated that, in general, the aesthetics of the region would be negatively impacted by the rail line and suggested that the Rail Alignment EIS did not adequately assess the impacts of the rail line. The comments focused primarily on the Caliente Rail Line as a whole and specifically, the Garden Valley areas.

**Response:** This issue was raised during the EIS comment and review process and DOE addressed this issue in the Rail Alignment EIS.

DOE used the Bureau of Land Management methods to evaluate impacts to visual resources. This method considers visual effects qualitatively, according to the level of contrast (none, weak, moderate, or strong) created by a project (Table 4-31, page 4-72). Section 3.2.3.3.2 describes the proximity of the rail line and alternative segments to communities, Wilderness Areas and Wilderness Study Areas, parks, and other areas such as the City sculpture identified during the public scoping process. Most of the key observation points provide views from highway corridors or communities across the rail line, DOE assessed project impacts based on views from these key observation points (Section 4.2.3.1, page 4-71; and Table 3-14, page 3-110). The DOE and Bureau of Land Management concluded that construction and operation of the railroad would not be inconsistent with the Bureau's goals and objectives for resource management, including those for visual resources (Section 4.1.4, page 4-6). These issues are also addressed in the CRD Section 3.7.10(1093) page CRD3-221 and Section 3.11(1311) page CRD3-250.

**Comment(s):**

***[Timbisha Shoshone Tribe]***

Aesthetics. The CRA will negatively impact the aesthetics of the region. Induced traffic and additional use by other federal agencies of the CRA will increase these impacts.

***[Dia Art Foundation]:***

DOE's insufficient consideration of BLM's thoughtful, environmentally-beneficial recommendations for a visual resource plan in Garden Valley. The Caliente Rail Corridor will bring noise, pollution, and noxious weeds into pristine Garden Valley and disrupt the quiet majesty and uninterrupted viewshed of City and the surrounding Quinn Canyon and Worthington Ranges.

***[Dia Art Foundation].***

Additionally, the simulations outlined in Appendix D: Aesthetic Resources are based on key observations points that have no relationship to City, nor to Heizer's conception of how the artwork will be seen, and thus do nothing to quell our concerns about the presence of a rail line in the valley.



Appendix A  
Technical Comments & Responses

**Subject:** Cost Detail

**Summary of Comment(s):** The Timbisha Shoshone Tribe contends that the Draft Rail Alignment EISs do not provide detailed information on the construction costs of the Caliente and Mina preferred rail alignments

**Response:** This issue was raised during the EIS comment and review process and DOE addressed this issue in the Rail Alignment EIS

Detailed information on the construction costs of the Caliente Rail Line are presented in DOE's Application for a Certificate of Public Convenience and Necessity, submitted March 17, 2008, at page 37. The Rail Alignment EIS contains information on the construction costs of the Caliente Rail Line (Section 2.2, pages 2-5) and in a reference to the Rail Alignment EIS (DIRS 182777). This issue was responded to in the CRD Section 3.4 5(937) page CRD3-62. The Draft Rail Alignment EIS contained construction cost information in Chapter 2 (DIRS 182777 and 182778) for the Caliente and Mina rail lines

**Comment(s):**

*[Timbisha Shoshone Tribe]*

Cost of the Proposed Action: The Draft Rail Alignment EIS' do not provide detailed information on the construction costs of the Caliente and Mina preferred rail alignments

Appendix A  
Technical Comments & Responses

**Subject:** Cumulative Impacts

**Summary of Comment(s):** Clark County commented that the Department of Energy does not adequately address cumulative impacts in its Draft Rail EIS and does not appear to raise them in the DOE Application.

**Response:** DOE addressed this issue in the Rail Alignment EIS

The Department has provided a complete analysis of cumulative impacts (Chapter 5) based upon the resource-specific regions of influence described in Chapters 3 and 4. Those regions of influence range from the immediate vicinity of the rail alignment (e.g., disturbed land or noise) to large area impacts (e.g., socioeconomic or air quality). Included in the analysis are impacts that are reasonably foreseeable for Clark County. Potential cumulative impacts from Nevada Test Site operations (Section 5.2.1.2.2 and Table 5-1), Nellis Air Force Base (Section 5.2.1.2.5 and Table 5-2), and Creech Air Force Base operations (Section 5.2.1.2.5 and Table 5-2) are raised in the Rail Alignment EIS.

**Comment(s):**

*[Clark County]*

The Department of Energy does not adequately address cumulative impacts in its Draft Rail EIS, and does not appear to raise them in its Application. Potential impacts of the DOE's Application on the Nevada Test Site operations, Nellis Air Force Base, and Creech Air Force Base operations have not been adequately addressed.

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**Subject:** Design of Transportation Aging and Disposal Canisters (TADs)

**Summary of Comment(s):** Clark County contends that DOE's insufficient discussion regarding DOE's intended use of TADs constitutes a significant departure from NEPA's requirements. The use of such canisters for transport by rail requires the DOE to evaluate and examine the feasibility of TADs; however, in the Draft Rail EIS DOE essentially commits to the use of TADs. Hence, DOE has committed to the use of a canister for which no design or approval exists. Such commitment without due consideration and thorough examination of all reasonable alternatives is inappropriate.

**Response:** This issue was raised during the EIS comment and review process and DOE addressed this issue in the Rail Alignment EIS.

The Repository SEIS CRD Section 1.4.1 (49) CR-218, states, "In the Yucca Mountain FEIS, DOE evaluated the receipt of commercial spent nuclear fuel under two packaging scenarios: mostly canistered, in which the Department would transport and receive most commercial spent nuclear fuel in dual-purpose canisters; and mostly uncanistered, in which it would transport and receive most commercial spent nuclear fuel uncanistered. In the mostly canistered scenario, DOE would open dual-purpose canisters at the repository and repackage the spent nuclear fuel in waste packages. In the mostly uncanistered scenario, the Department would transfer spent nuclear fuel from transportation casks to waste packages. In both scenarios, DOE would handle the fuel at the repository in an uncanistered condition before loading it into waste packages for emplacement. From a transportation standpoint, the primarily canistered approach in the [Repository SEIS] is not a significant departure from the approach in the [Yucca Mountain FEIS]. The implementation of TAD canisters would not measurably change the number of required transportation shipments. The TAD canister concept at the repository would simplify operations, thereby reducing health and safety impacts and potential for accidents. In any event, DOE could not use TAD canisters without NRC approval of the DOE proposal through the licensing proceeding."

**Comment(s):**

*[Clark County]*

Insufficient discussion regarding the DOE's intended use of TADs constitutes a significant departure from NEPA's requirements. The use of such canisters for transport by rail requires the DOE to evaluate and examine the feasibility of TADs. Yet, in the Draft Rail EIS, the DOE essentially commits to the use of TADs. The relevant EIS indicates that "the DOE would seek NRC certification of the TAD canister design for surface storage at commercial sites and for transportation." See Draft Rail EIS at S 2.2, pg 8. Hence, the DOE has committed to the use of a canister for which no design or approval exists. Such commitment without due consideration and thorough examination of all reasonable alternatives is inappropriate.

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**Subject:** Environmental Justice

**Summary of Comment(s):** The Native Community Action Council commented that the STB has an obligation to address environmental racism (justice) claims with regard to the Caliente rail line because Native Americans will bear a disproportionate burden of risk from the shipment of spent nuclear fuel and high-level radioactive waste. The Native Community Action Council further states that the DOE has not considered these disproportionate impacts and that the STB should employ the trust relationship in considering the issue themselves.

**Response:** This issue was raised during the EIS comment and review process and DOE addressed this issue in the Rail Alignment EIS.

As discussed in the CRD Section 3.7.13 (168) page CRD3-229, DOE identified the socioeconomic region of influence as the counties through which the rail line would pass. That region includes two American Indian Homelands, the Walker River Paiute Reservation and the Timbisha Shoshone Trust Lands near Scottys Junction. DOE used Bureau of the Census information to describe the demographic baseline for the Walker River Paiute Reservation. At present, there are no residents on the Timbisha Shoshone Trust Lands, so there is no population information. There are no other tribal communities in the region of influence. This identification is consistent with Council on Environmental Quality (CEQ) and Nuclear Regulatory Commission (NRC) guidelines for identification of low-income populations and minority communities, including American Indian communities. The DOE analysis of environmental justice is consistent with CEQ guidance.

The CRD Section 3.7.13 (168) page CRD3-229, further states that, based on current information, DOE has concluded that constructing and operating the proposed railroad along the Caliente rail alignment would not result in any disproportionately high and adverse impacts to minority or low-income populations. In preparing the Nevada Rail Corridor SEIS and the Rail Alignment EIS, no special pathways were identified (CRD Section 3.7.14.1 (4151) page CRD3-236), therefore, DOE concluded that there would be no disproportionately high and adverse impacts to minority or low-income populations.

**Comment(s):**

*[Native Community Action Council]*

The NCAC is in OPPOSITION to the DOE application and urges rejection/dismissal by the Board on the basis that upon information contained in the DOE application the proposed action constitutes a major federal action the effects of constitute environmental racism. The Board has an obligation and responsibility to address environmental racism under Executive Order 12898 to ensure that low-income, minority and subsistence population are considered and do not suffer disproportionately in the management of federal programs resulting in environmental consequences from the siting and operation of federal facilities. Yucca Mountain and the associated Caliente rail line constitute a federal facility that require the Board to exercise its trust responsibility and investigate the claim of environmental racism. NCAC members have existing inherent tribal rights and interests and possess a beneficial interest in lands sought in the DOE application for the Caliente rail line and would force the Native American occupants vested by treaty to bear a disproportionate burden of risk from the shipment of SNF and HLW.

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*[Native Community Action Council]*

The NCAC requests that the Board to fully implement its regulations and employ the trust relationship as it relates to Native American stakeholders and tribes. The rights and liberties of free people should not be trampled and require protection by the US Constitution, treaties and law. The foreign policy implication of the instant transaction sought by the DOE application and the impacts upon Native American stakeholders have not been considered by the DOE. Large-scale deployment of technology has unintended and largely unknown consequence impact that are disproportionately borne by Native American stakeholders who deserve full benefit of the protection of all laws and full implementation of all environmental regulations for their protection.

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**Subject:** Grazing Impacts

**Summary of Comment(s):** White Pine County commented that the DOE NEPA documents generally fail to identify the White Pine County private base properties for grazing permittees holding public land grazing permits on allotments that will be crossed by the rail line in Lincoln and Nye Counties. Moreover, DOE failed to recognize any impacts to the efficient use and value of these private base properties resulting from construction and operation of the rail line as well as related loss or impaired use of public land grazing allotments. Lincoln County commented that by limiting the region of influence to the rail footprint, DOE completely ignored how grazing operations are conducted, thereby obscuring the numerous significant impacts to grazing allotments. Mr. Fallini contends that the Rail Alignment EIS uses disturbed acreage as the primary measure of impacts on ranching, however, in the case of the Twin Springs Ranch, DOE ignored the fact that the railroad would laterally bisect his primary grazing areas and cut-off grazing areas from water sources.

**Response:** DOE addressed these issues in the Rail Alignment EIS.

Section 3.2.2.5.1 contains information about the Taylor Grazing Act and definitions of base property. In the Caliente rail alignment, the rail line would not cross land base property but would cross pipelines on five allotments that convey water to base property. Table 3-7 of the Rail Alignment EIS indicates base water pipelines. DOE disagrees that the construction and operation of the rail line will directly affect the land or water base properties of grazing permittees whose base properties are in White Pine County but operate in Lincoln and Nye Counties. DOE has identified grazing allotments affected by the proposed action and has committed to work with affected permittees and the BLM to address and mitigate adverse impacts to grazing operations resultant from the proposed action. In this manner, impacts to any base property, whether crossed by the rail line or whether it is located remotely from the grazing activity, would be subject to the mitigation process described in Chapter 7.

Section 5.1.1 of the Rail Alignment EIS describes the DOE approach to defining the regions of influence for cumulative impacts analysis. DOE evaluated land use and ownership in the construction right-of-way to characterize direct impacts to land that DOE would access. Indirect impacts from the rail line outside the construction right-of-way would affect current grazing practices on allotments, particularly where the rail line acted as a barrier and isolated a portion of land. Section 5.2.2.2.1 of the Rail Alignment EIS acknowledges impacts associated with potential fragmentation of grazing allotments.

DOE is committed to working with affected permittees and the BLM to address and mitigate adverse impacts to grazing operations and infrastructure from the rail line. Chapter 7 of the Rail Alignment EIS describes how DOE would work with affected permittees and the BLM to describe measures DOE would consider for mitigation; these include the potential to support the development of Interim Grazing Management Plans and Allotment Management Plans and provide compensation or range improvements for direct loss of crops, pastures, rangelands, or reductions in animal unit months. In addition, Chapter 7 describes how DOE would take measures to minimize disruption to ranching operations and cattle movement during construction, such as providing temporary feed, water, and assistance in movement for livestock that could be isolated from normal feed and water sources. These measures would assist ranchers in keeping livestock away from the rail line during construction. DOE would coordinate with the permittees and the BLM on specific mitigation measures for each allotment.

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**Comment(s):**

***[White Pine County]***

The Taylor Grazing Act requires ownership of "base property" in order to receive a permit to graze domestic livestock on public land. Base property can be either land based, which requires private ownership of and/or access to a commensurate amount of private land, or water based, which requires ownership of and/or access to rights to quantities of water required to sustain the number of livestock for which a grazing permit is sought. DOE NEPA documents supporting the Caliente Rail Alignment generally fail to identify the private base properties in White Pine County which are required for holders of certain public land grazing permits authorizing grazing on allotments in Lincoln and Nye counties which will be crossed by the Caliente Rail Alignment. DOE NEPA documents also fail to identify any impacts to the efficient utilization or value to said private base properties which may result from construction and operation of the Caliente Rail Alignment and related loss of or impaired use of public land grazing allotments.

***[Lincoln County]***

Lincoln County is concerned that the DOE NEPA analysis does not accurately reflect how grazing allotments are actually utilized. The DOE has narrowly defined the potential region of land use influence as only the "footprints of construction and operations support facilities," or the "nominal width of the construction right-of-way," and "the locations of construction and operations support facilities outside the nominal width of the construction right-of-way." Rail Alignment DEIS at 3-3, 3-36. Far from being a "conservative" assumption, as asserted by the DOE, limiting the region of influence to the rail footprint completely ignores how grazing is conducted and obscures the numerous significant impacts to grazing allotments. In fact, as the County's detailed assessment demonstrates, all affected grazing operations, including land and water property rights, will be profoundly harmed and, even with implementation of mitigation, a number of grazing operations may be forced out of business.

***[Fallini]***

The DOE EIS uses "disturbed acreage" as the primary measure of impacts on ranching. In the case of the Twin Springs Ranch, DOE ignored the fact that the railroad would laterally bisect our primary grazing areas, and cut-off grazing areas from water sources.

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**Subject:** Groundwater Impacts

**Summary of Comment(s):** The Timbisha Shoshone Tribe maintains that an accident involving a waste shipment along the Caliente rail line could pose the potential to impact groundwater resources. DOE should specify what immediate remediation steps the Department would take after an accident to ensure the integrity of the groundwater.

**Response:** DOE addressed this issue in the Rail Alignment EIS and the Yucca Mountain FEIS.

Under incident-free conditions, there would be no environmental contamination because the spent nuclear fuel and high-level radioactive waste would not be released from shipping casks. In addition, the radiation emitted from shipping casks under incident-free conditions would have no discernible impacts on groundwater. All high-level radioactive waste would be in a solid form before DOE would ship it to Yucca Mountain (Section L 1, page L-1). As discussed in Section J 1 4 2 1 of the Yucca Mountain FEIS, there would be no environmental contamination unless a severe accident resulted in a breach of containment of the shipping cask. In the unlikely event that radioactive materials would be released from a shipping cask during an accident, DOE would collect and remove all contaminated soil and other materials from the accident site that could result in contamination of groundwater.

**Comment(s):**

*[Timbisha Shoshone Tribe]*

Water rights and sources The Tribe relies on well water for its subsistence. An accident involving a HLRW shipment along the CRA poses the potential to impact these groundwater resources. The DOE should have specified how it will immediately remediate an accident and what steps will be taken to ensure the integrity of the groundwater.



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**Subject:** Land Ownership

**Summary of Comment(s):** The Native Community Action Council comments that DOE minimizes Native American interests through discriminatory actions, resulting in denying Western Shoshone people rights to lands that are held by the Ruby Valley Treaty. Further, the Native Community Action Council believes that the DOE has reported inaccurate land status in the Rail Alignment EIS through misinterpretations of law with regard to the Ruby Valley Treaty. Finally, the Native Community Action Council contends that the entire length of the Caliente rail line exists within the boundaries of the Ruby Valley Treaty.

**Response:** This issue was raised during the EIS comment and review process and DOE addressed this issue in the Rail Alignment EIS.

As discussed in the CRD Section 3.3.2 (4133) page CRD3-39, the Western Shoshone people maintain that the Ruby Valley Treaty of 1863 gives them rights to 37,000 square miles in Nevada, including the Yucca Mountain region. In 1977, the Indian Claims Commission granted a final award to the Western Shoshone people, who dispute the Commission's findings and have not accepted the monetary award for the lands in question. A U.S. Supreme Court decision [United States v. Dann, 470 U.S. 39 (1985)] held that the Western Shoshone claim to land associated with the Ruby Valley Treaty has been extinguished, and that the United States had made fair compensation. In United States v. Dann, the Supreme Court ruled that even though the money has not been distributed, the United States has met its obligations with the Indian Claims Commission's final award and, as a consequence, the aboriginal title to the land has been extinguished.

**Comment(s):**

*[Native Community Action Council]*

The DOE engages in a process of minimizing Native American interests violating individual and collective tribal rights by denying them the use of their aboriginal and treaty lands and continuing to apply discriminatory legal doctrines, the US deprived the Western Shoshone Indians of their human rights under Articles II (right to equality before the law), XVII (right to recognition of juridical personality and civil rights), and XVIII (right to a fair trial) under the American Declaration. The pattern of argument used by the DOE eliminates any consideration of ongoing Native American ownership interests in land or potential impacts to the land and the people that rely upon them for their existence.

*[Native Community Action Council]*

The NCAC is in OPPOSITION to the DOE application and urges rejection/dismissal by the Board on the basis that the DOE application is incomplete for failure to comply with the Board's regulations, principle of which are those that require the application to include basic information about the proposal required by §1150.4(a) "Information about the proposal." The DOE omits correct and accurate land status information in its application. See Application, p. 14. While it is true that the Bureau of Land Management manages 96 percent of the land required for construction of the rail line, all of the land sought in the DOE application constitutes no portion of the US, the State of Nevada, or Lincoln, Nye or Esmeralda Counties, in as much as the 300-mile rail line exists within the exterior boundaries of the Western Shoshone Nation. The usufruct enjoyed by the US is subject to the treaty.

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*[Native Community Action Council]*

The US has failed to fulfill its obligations under the terms of Article 7 [of Ruby Valley Treaty] and therefore it is the position of the Western Shoshone National Council that failure by the US obligation of payment constitutes an abandonment of the interests sought

*[Native Community Action Council]*

The DOE fails to include or provide reference to all applicable laws acknowledging the basic principles of territorial integrity and continuity of Native American interests to the lands referenced in the DOE application and thereby misinterprets the ownership status of the 300-mile Caliente rail line as submitted in information about the proposal

*[Native Community Action Council]*

The entire length of the proposed Caliente rail line exists within the exterior boundaries of the Treaty of Ruby of Valley and constitute no portion of the State of Nevada

*[Native Community Action Council]*

Negotiations are the preferred method of achieving liberty and free enjoyment of rights and interests belonging to the Western Shoshone people. The DOE proposal to construct and operate a 300-mile rail line would interfere and obstruct the ongoing efforts seeking to fulfill Article 6 of the Treaty of Ruby Valley by Native American Stakeholders and is not convenient and necessary in relation to the paramount obligation of the US vis-a-vis the treaty. Further, the proposal does not exhibit the principle of fair and honorable dealings between allies, friends and among larger nations to respect smaller ones. Rather, it seeks to induce the Board to the belief in a truth of what does not exist.

*[Native Community Action Council]*

In Exhibit H, the DOE omits information and misrepresents the facts of extant title vested in the Western Shoshone Nation, 343 American Treaty Issues (3-712). The legal dispute began when the US failed to meet its obligation due by Article 7 of the Treaty of Ruby Valley and persists to this day. The Western Shoshone Nation possesses all the interests sought by the US. The ICC never completed its statutorily required final report to Congress in Docket 326-k and was disbanded in 1978. The final report to Congress did not cease to be a condition of finality when the ICC was terminated by Congress in 1978. Thus, since the ICC no longer exists to file the necessary report, it is now too late for the US to ever achieve "finality" in the Western Shoshone case within the statutory framework of the ICC Act. The ICC proceedings did not effect title transfer or extinguishment of Western Shoshone title. No reference to the assertions by the DOE that "Western Shoshone title to Nevada lands had gradually been extinguished . . . [sic]" exists. Such misrepresentations do a disservice to the Board and the public. The DOE focus on judicial opinions seeks to derogate from law it is unwilling to abide by and fashion court opinions as judicial legislation without avoiding the appearance of impropriety.

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**Subject:** Noise Impacts

**Summary of Comment(s):** The Dia Art Foundation suggests that the DOE methodology for assessing noise impacts in Garden Valley is insufficient

**Response:** This issue was raised during the EIS comment and review process and DOE addressed this issue in the Rail Alignment EIS

The methodology DOE used to assess noise impacts meets the regulations put in place via the Noise Control Act, as Amended (42 USC 4901 et seq ) (Rail Alignment EIS, page 6-28) As explained in the Rail Alignment EIS, DOE sampled ambient noise near residential areas the proposed alignment would pass. The region of influence is relatively unpopulated and the noise and vibration measurement sites reflect that. DOE followed Surface Transportation Board and Federal Transit Administration noise guidelines, which do not address the impact of noise on wildlife. Several areas in the region of influence are exposed to substantial noise, for example military aircraft training in Garden Valley In such cases, the introduction of train noise would be minor in comparison with existing noise. The Shared-Use Option portion of the noise study based train traffic volumes on future activity that is reasonably foreseeable

The noise impacts in Garden Valley are addressed in Section 4.2.8.3.3, page 4-277, and in Section 4.2.8.5 DOE specifically refers to the opposing viewpoint presented by the Dia Foundation regarding ambient noise levels in Garden Valley DOE's analysis demonstrates that train noise would not exceed train noise impact criteria under STB noise regulations (49 CFR 1105.7(c)(6)). Furthermore, special lands that employ impact criteria based on audibility, such as the Grand Canyon National Park, have special noise regulations imposed by the U.S. Congress This area in Garden Valley does not fall under the jurisdiction of this special type of noise regulation.

**Comment(s):**

*[Dia Art Foundation]*

DOE's insufficient analysis of increased traffic under the shared-use Rail Line scenario Among the many devastating impacts will be the tremendous negative impact to Garden Valley's natural soundscape where ambient noise hovers about 15 dBA, a level so low that special equipment was needed to measure it (As comparison, typical quiet suburban areas far from major roadways will often be around 30 dBA in the late night hours )

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**Subject:** Transportation Impacts

**Summary of Comment(s):** *White Pine County believes that the amount of traffic on state and federal highways will increase due to vehicles carrying equipment and construction materials to support the construction of the rail line*

**Response:** DOE addressed this issue in the Rail Alignment EIS

DOE would obtain most of the materials for rail roadbed construction locally (for example, from concrete batch plants and quarries) or would have these materials shipped by rail. Therefore, anticipated increases to traffic volumes on highways would be local (Rail Alignment EIS, Sections 4.2.9 and 4.3.9)

It should be noted that most of the construction materials for the Caliente rail line (that were not available locally) would be transported to Caliente by rail and would not be transported through White Pine County from I-80 south to the rail alignment by trucks

The materials necessary for repository construction would be available in Las Vegas, and would not be transported to the repository or Las Vegas through White Pine County by trucks

**Comment(s):**

*[White Pine County]*

It is very likely that truck traffic through White Pine County will increase dramatically as vehicles carrying equipment and construction materials access the Caliente Rail Alignment from I-80 south through White Pine County on U. S. 93 connecting with both U. S. 6 and S.R. 318, which cross the rail alignment. As a result truck related accident rates will likely increase in the County as will truck related congestion and travel impediments. This issue was not addressed within the DOE's NEPA documents

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**Subject:** Inadequate Assessment of Radiation Exposure – ROI

**Summary:** The State of Nevada, the Native Community Action Council, the Timbisha Shoshone Tribe, Nye and Mineral Counties, and Mr. Fallini noted a number of issues regarding the adequacy of the assessment of radiological exposure for transport of spent nuclear fuel and high-level waste on the Caliente rail line.

- Definition of the radiological region of influence (0.5 mile on either side of the corridor for incident-free and 50-mile radius for accidents) illustrates the hazardous nature of the radiological materials.
- Inclusion of meaningful information on radiological characteristics of spent nuclear fuel and high-level waste
- Estimates of the consequences of radiation to workers and the public from routine rail shipments and accident conditions
- Native Community radiological risk, tribal risk perception, and stigma
- Evaluation of all potential safety and health-related risks that may arise.
- Completion of a radiological survey prior to issuing a record of decision on the Caliente Corridor and assessment of the potential radiological risk to workers and the public during construction.
- Accident prevention, security, and emergency response planning requirements and costs
- Doses to workers, responders, and the public from severe accidents and successful terrorist attack or sabotage.
- Economic losses from severe accidents and/or successful terrorist attack or sabotage and cleanup and recovery costs resulting from release of radioactive materials.
- Effects of stigma or perceived risks
- Assessment of how selecting Caliente as the preferred rail access option affects Las Vegas.

**Response:** These issues were raised during the EIS comment and review process and DOE addressed the issues in the Rail Alignment EIS and the Repository SEIS.

DOE applied the “radiological region of influence” solely to conduct the Rail Alignment EIS radiological impact analysis and identify the population potentially affected by exposure to radiation from routine railroad operations and in the event of an accident. The 0.5-mile distance for estimating the potentially affected population for incident-free transportation of spent nuclear fuel casks (see Appendix K, Section K 2.1.1) and the 50-mile distance for estimating the potentially affected population for accident analyses (see Section K 2.4) are standard distances DOE and other agencies have applied in previous transportation analyses (DIRS 185281-AEC 1972, all). In addition, DOE used population data from the 2000 Census to determine the estimated population within these regions of influence. These population estimates were then escalated to the year 2067 to account for potential population growth along the rail alignments and near the Staging Yard locations during operation of the proposed railroad, as described in Section K 2.1.2. The radiological characteristics of SNF and HLW are provided in Section K 2.4.2.

The commenter’s statements of the radiological exposures surrounding bare spent nuclear fuel are applicable only if personnel or the public were exposed to bare spent nuclear fuel, which they are not. All SNF would be shielded in NRC-certified transportation casks, which would greatly reduce the potential radiation exposure to workers and the public. The Repository SEIS CRD Section 1.6.2.5

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(163) CR-249, provides statements relative to the dangerous nature of SNF, "DOE has acknowledged the potential risks inherent in handling and shipping spent nuclear fuel and high-level wastes. Appendix D, Section D 1 5 1 of the Repository SEIS states, 'exposures to high levels of radiation at high dose rates over a short period (less than 24 hours) can result in acute radiation effects.' DOE agrees that if it were possible to do so, a person who remained in contact with an unshielded spent nuclear fuel assembly for 1 to 2 minutes, as described by the commenter, would be likely to experience acute radiation effects that could be fatal "

With respect to radiological health impacts from rail shipments, Section 4 2 10 presents radiological and non-radiological health impacts to workers and members of the public for routine (incident-free) transport, transportation accident risk, and consequences from maximally reasonably foreseeable accidents and sabotage and terrorism events.

As to the conservative nature of the radiological impacts of incident-free transportation, the Repository SEIS CRD states, "The radiological impact analysis for spent nuclear fuel and high-level radioactive waste transportation assumed that the external radiation levels emitted from each transportation cask would be at the regulatory limit of 10 millirem per hour at a distance of 2 meters (6 6 feet). This assumption would tend to overestimate radiation dose to workers and the public because not all casks would be loaded with spent nuclear fuel or high-level radioactive waste with characteristics that resulted in the cask external dose rate being at the regulatory limit. The Electric Power Research Institute report, "Assessment of Incident Free Transport Risk for Transport of Spent Nuclear Fuel to Yucca Mountain Using RADTRAN 5 5," noted that more than 40 percent of the shipped spent nuclear fuel would probably have cooled for more than 20 years and would be less radioactive (DIRS 185330-EPRI 2005, all). Therefore, external dose rates for casks shipped would be lower than the regulatory limit. Incident-free dose would be directly proportional to the cask external dose rate, therefore, if the external dose rate was 30 percent lower than the regulatory limit, the estimated incident-free dose would be 30 percent lower than that estimated assuming the regulatory limit for each cask. Appendix J, Section J 1 2 3 4 of the Yucca Mountain FEIS discussed this issue. The FEIS analysis estimated that the dose rate would be 50 to 70 percent of the regulatory limit. As a result, radiological risks to workers and the public from incident-free transportation are likely to be no more than 50 to 70 percent of the values estimated using the regulatory dose rate (Repository SEIS CRD 1 7 8 (1814), page CR-381) "

In terms of performing radiological surveys, as explained in the Rail Alignment EIS CRD, "In April 1996, a Federal Facility Agreement and Consent Order was entered into by and among the State of Nevada, acting by and through the Department of Conservation and Natural Resources, Division of Environmental Protection, DOE, and the U.S. Department of Defense. The purpose of the Consent Order was to identify sites of potential historic contamination due to Nevada Test Site operations and implement proposed corrective actions based on public health and environmental considerations. The Consent Order identifies Corrective Action Units, which are groupings of Corrective Action Sites that delineate and define areas of concern for contamination. Offsite Corrective Action Sites include the Central Nevada Test Area and Project Shoal. DOE submitted Closure Reports to the Nevada Division of Environmental Protection indicating that the site remediation process with respect to surface contamination was complete on February 13, 1998, for Corrective Action Unit 416 and on June 27, 2002, for Corrective Action Unit 417. Based on the work conducted under the Consent Order, the potential for workers or the public to be exposed to contamination due to fallout during railroad construction and operations in either rail corridor would be unlikely. DOE is not aware of any

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*information identifying similar contamination off the Nevada Test Site in the vicinity of the rail corridors (Rail Alignment EIS CRD 3.7.8 (1301), page CRD3-199) "*

Appendix L of the Rail Alignment EIS provides supplemental information concerning many facets of the transportation program. The information includes details concerning transportation regulations, system components, operational practices, cask safety, emergency response, technical assistance and funding, transportation security, and liability.

The Caliente route does not travel through Las Vegas, however, since the Repository SEIS evaluates impacts as a result of national transportation, it does address the impacts of transportation through Las Vegas. The final number of shipments that could travel through Las Vegas could vary due to national routing decisions. The Repository SEIS CRD, states, "If DOE selected the Caliente rail alignment, the representative rail routes analyzed in the Repository SEIS do not show large numbers of shipments through Las Vegas. The representative rail routes in Appendix G would result in DOE shipping 755 casks through Las Vegas. The representative rail routes in Appendix A would result in DOE shipping 825 casks through Las Vegas (SEIS CRD 1.7.14.1 (992), page CR-421) " The Repository SEIS addresses routing variations in Sections A.3 and G.2. DOE included the population of the Las Vegas area within the ROI, escalated to the year 2067 (SEIS 6.1.5 and G.6.1.4). Unique local conditions are evaluated for incident-free impacts in Las Vegas and Reno (SEIS Table 6-15). Accidents and sabotage events were evaluated in a hypothetical urban environment which includes Las Vegas and projected tourists (SEIS G.7). Unique local conditions for accidents and sabotage are addressed in the Repository SEIS (G.9.8).

**Comment(s):**

*[State of Nevada]*

The Application states that DOE expects a peak average of 8 one-way cask trains per week on the proposed new rail line from Caliente to Yucca Mountain, (pg. 15). Neither the Application nor the Draft RA EIS (Exhibit H) explain how DOE arrived at this traffic estimate. The Board should direct DOE to explain how it calculated this traffic estimate. The Board should also direct DOE amend its application to explain how the peak average cask trains per week estimate would change under the Inventory Module 2 scenario, with and without construction of new nuclear power plants.

In its Application, DOE has chosen to provide little meaningful information about the radiological characteristics of the primary commodities for which DOE says the rail line is needed, spent nuclear fuel and high-level radioactive waste. Nevada believes that DOE's failure to provide this information is not only intentional, but also intended to divert the discussion of necessity and public convenience away from the fact DOE proposes to ship very dangerous materials to and on the proposed Caliente rail line.

Spent nuclear fuel from commercial nuclear power plants would account for 90 percent of the radioactive wastes that DOE proposes to ship to and on the Caliente rail line. The most basic facts about spent nuclear fuel are that it is lethal to human beings, and that it remains lethal for many millennia. Nevada has evaluated the DOE design basis SNF for the new rail shipping casks (PWR spent fuel, 4.2% initial enrichment, burn up 50,000 MWDt/MTHM, 10 years cooling time, contact dose rate in excess of 35,000 rem/hour). The SNF that DOE plans to ship is so radioactive that even after 10 years of cooling, unshielded exposure to a single fuel assembly could deliver a dose of 600 rem of radiation (600 rem) in a little more than one minute. The Nuclear Regulatory Commission ("NRC")

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considers 450 rem received over a very short period to be a "lethal dose" it is "[t]he dose of radiation expected to cause death to 50 percent of an exposed population within 30 days..." See <http://www.nrc.gov/reading-rm/basic-ref/glossary/lethal-dose-ld.html>

Each DOE rail cask would contain an enormous amount of dangerous radioactive material. Fission products, especially Strontium-90 (half-life 28 years) and Cesium-137 (half-life 30 years), account for most of the radioactivity in SNF for the first hundred years after removal from reactors. Each DOE rail cask of commercial SNF would contain more than 1.5 million curies of radioactive cesium and strontium, more than 100 times the amount of those fission products released by the Hiroshima bomb. Each DOE dedicated train hauling three or four rail casks would contain more Cesium-137 than the total amount (2.4-2.9 million curies) released during the Chernobyl reactor accident in the Soviet Union.

### *[State of Nevada]*

DOE SNF and HLW shipments to and on the Caliente rail line will create radiological impacts even if there are no accidents or terrorist incidents. The fission products in SNF and HLW create intense gamma radiation emissions. NRC regulations allow shipping casks to emit a small amount of radiation during routine operations (1,000 mrem/hr at the cask surface and 10 mrem/hr 2 meters from the cask surface). The dose rate allowed under NRC regulations results in near-cask exposures of about 2.5 mrem per hour at 5 meters (16 feet), in measurable exposures (less than 0.2 mrem per hour) at 30 meters (98 feet), and calculated exposures (less than 0.0002 mrem per hour) at 800 meters (one-half mile) from the cask surface.

In Exhibit H, DOE acknowledges that cumulative routine radiation from shipping casks could pose a health threat to certain transportation workers. DOE proposes to control these risks by restricting work hours and doses for certain jobs. DOE concludes that members of the general public would not receive significant doses from passing trains. DOE concludes that even the maximally exposed members of the public - a service station attendant, a resident near a rail yard, or a motorist stuck next to a truck cask in a traffic jam - would not suffer significant adverse health effects.

Nevada's analyses conclude that the consequences of radiation from routine rail shipments could be more significant than the DOE estimates in Exhibit H and in the Draft SEIS analyses upon which Exhibit H is based. Nevada analyses have found that routine transportation radiation exposures could result in higher doses, both to workers and to members of the public, and in more significant health effects, than estimated by DOE. Moreover, the very fact that these exposures would occur may adversely affect the public even though the dose levels are well below the established thresholds for cancer and other health effects.

### *[State of Nevada]*

In its consideration of DOE's Application, the STB must consider the unique characteristics of spent nuclear fuel and high level waste. This cargo is so high temperature and so highly radioactive that it will create a one-half mile radiological region of influence around the proposed new 300-mile rail line in Nevada, and around the 22,000 miles of railroads that will transport spent nuclear fuel and high-level waste to Caliente through 44 States and the District of Columbia. Previous studies by DOE and Nevada found that 10 to 12 million Americans currently live within the one-half (0.5) mile radiological region of influence around the rail routes DOE proposes to use for shipments to Caliente.



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In the Draft Rail Alignment EIS (Exhibit H), DOE defines the radiological region of influence (ROI) for incident-free transport as the area 0.8 km (0.5 mi) on either side of the rail alignment centerline. DOE defines the radiological ROI for accidents and sabotage as the area 80 km (50 mi) on either side of the rail alignment centerline. The Draft RA EIS defines the affected environment for public radiological effects as (1) residents within the region of influence, "including persons who live within 0.8 kilometer (0.5 mile) of either side of the centerline of the rail alignment," (2) individuals at locations "such as residences or businesses near the rail alignment," and (3) for effects related to accidents or sabotage, individuals within the area "80 kilometers (50 miles) on either side of the centerline of the rail line." [Pp. 3-4 to 3-5, 3-350 to 3-351]. Nevada believes that DOE's definition of the radiological region of influence reflects how uniquely hazardous this material is. The fission products in SNF and HLW, especially the radioactive cesium, create the potential for widespread contamination in the event of a severe accident or act of terrorism. The same fission products contained within the shipping cask create an intense field of gamma radiation that results in continuous radiation from the outside surface of the cask during routine operations. NRC regulations allow shipping casks to emit 1,000 mrem/hr at the cask surface and 10 mrem/hr 2 meters from the cask surface. The hourly dose at two meters is about the equivalent of a chest X-ray.

Before accepting DOE's claim of public convenience and necessity, the STB must consider the interests of millions of Americans who live and work within the nationwide radiological ROIs that will be created by the proposed Caliente rail line. DOE has not adequately assessed radiation doses to workers and the public from routine operations, and the creation of elevated exposure zones at near-route locations, accident prevention, security, and emergency response planning requirements and costs are not adequately addressed, doses to workers, responders, and the public from severe accidents and successful terrorist attack or sabotage are not adequately addressed, economic losses from severe accidents and/or successful terrorist attack or sabotage, and cleanup and recovery costs resulting from release of radioactive materials or the effects of stigma or perceived risks.

*[State of Nevada]*

In its consideration of DOE's Application, the STB must consider the unique characteristics of spent nuclear fuel and high level waste. This cargo is so high temperature and so highly radioactive that it will create a one-half mile radiological region of influence around the proposed new 300-mile rail line in Nevada, and around the 22,000 miles of railroads that will transport spent nuclear fuel and high-level waste to Caliente through 44 States and the District of Columbia. Previous studies by DOE and Nevada found that 10 to 12 million Americans currently live within the one-half (0.5) mile radiological region of influence around the rail routes DOE proposes to use for shipments to Caliente.

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*[State of Nevada]*

Technical Comments – Inadequate Assessment of Radiation Exposure – ROI

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Nevada believes that DOE's definition of the radiological region of influence reflects how uniquely hazardous this material is. The fission products in SNF and HLW, especially the radioactive cesium, create the potential for widespread contamination in the event of a severe accident or act of terrorism. The same fission products contained within the shipping cask create an intense field of gamma radiation that results in continuous radiation from the outside surface of the cask during routine operations. NRC regulations allow shipping casks to emit 1,000 mrem/hr at the cask surface and 10 mrem/hr 2 meters from the cask surface. The hourly dose at two meters is about the equivalent of a chest X-ray.

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### *[State of Nevada]*

In Nevada, Clark County and the City of Las Vegas provide an example of how counties and cities would be affected by the creation of radiological ROIs along DOE's rail routes to Caliente. The lowest estimate of shipments, assuming DOE uses dedicated trains with 3 casks per train, would result in 5-13 trains per year through Las Vegas, for 50 years. The mid-range for Las Vegas could be 23-62 trains per year. The maximum impact on Las Vegas could be 46-118 trains per year through the city.

In northern and southern Nevada, many tens of thousands of people live within the 0.5-mile regions of influence, and more than two million live within the 50-mile region of influence for accidents and sabotage. Because DOE has selected Caliente as the preferred rail access option, the State of Nevada has focused its analysis on the radiological ROIs in Las Vegas and Clark County. If DOE should reconsider the Mina option, or any of the other rail access options from Northern Nevada, further evaluation of impacts on Reno-Sparks, Elko, and other urban areas along the Union Pacific mainline would be required.

### *[State of Nevada]*

The State of Nevada estimates at least 95,000 residents of Clark County live within one-half mile of the Union Pacific route for shipments to Yucca Mountain via Caliente. Nevada consultants developed these estimates by applying the radiological ROIs to the potential DOE shipping routes, based on a half-mile buffer around the UPRR mainline, using the Clark County GIS Management Office "street centerline" file, and the Bureau of the Census 2005 census tract estimates. See <http://www.state.nv.us/nucwaste/news2008/pdfwm2008perspective.pdf>

Figure 3 shows the radiological region of influence (ROI) for routine rail shipments to Caliente via Las Vegas. A large portion of the world-famous Las Vegas "Strip" is located within the ROI. Using the same GIS methodology, Nevada consultants estimate that 34 Las Vegas hotels (shown in blue on Figure 3) and about 49,000 hotel rooms are located within the ROI. Based on previous studies, Nevada estimates at least 40,000 nonresident visitors and workers in Clark County would likely be located within one-half mile of the highway and rail routes for shipments to Yucca Mountain at any hour of the

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day State of Nevada estimates virtually all of Clark County's 1.8 million residents live within the 50-mile radiological region of influence for transportation accidents and sabotage

*[State of Nevada]*

Neither the Draft SEIS nor the Draft RA DEIS (Exhibit H) specifically assess the how selecting Caliente as the preferred rail access option effects Las Vegas, or how, if DOE reconsiders, and chooses the Mina option, DOE's new choice will effect Reno-Sparks. According to the DOE, these effects "are not included in the estimates of impacts for the Caliente and Mina rail corridors but are included in the national impacts" presented in the DSEIS [p. 6-41]. But the discussion of national impacts in the Draft SEIS excludes the unique local conditions that exist in downtown Las Vegas and Reno-Sparks. In one of the few instances where the DSEIS does respond to Nevada studies, the DOE estimates of routine exposures in Las Vegas [p 6-42] are hundreds of times too low because DOE underestimates shipment numbers and ignores repeated stop times at specific locations. Throughout the Draft SEIS, DOE ignores, misinterprets, or dismisses Nevada's contention that unique local conditions should be factored into impacts of routine shipments, impacts of accidents, impacts of sabotage, and perceived risk impacts.

*[Native Community Action Council]*

The NCAC challenges the basic assumptions of Exhibit H regarding land use and ownership that underlay Native American stakeholder radiological risk, tribal risk perception, stigma, potential impact and culturally appropriate impact mitigation.

*[Timbisha Shoshone Tribe]*

**Radiation Hazard** The FEIS indicates that the radiological region of influence for non accident radiation extends 800 meters on either side of the route. It also the "latent cancer fatalities" (LCF) that would result. Further, plans for the Caliente Alternative Segment include an interchange yards at the Yucca Mountain site. The interchange (and staging) yard would also have a one-half mile radius radiological region of influence. The DOE fails to documents why imposing this burden serves the public interest when there is no risk associated with leaving the waste in its current location.

The FEIS describes how workers will have their radiation exposure limited to 2,000 hours per year on the railroad. The DOE describes how they will mitigate exposures to employees. On the other hand; the DOE does not describe how the radiation emitted to the population living along the rail line will be mitigated.

*[Nye County]*

DOE has not evaluated all potential safety and health-related risks that may arise from its Caliente corridor.

*[Nye County]*

DOE has failed to conduct a radiological survey of areas of the Caliente Corridor affected by weapons testing and it should be compelled to do so before any certificate of public convenience and necessity is approved. DOE's proposed Caliente corridor traverses areas of Nevada that were subject to radioactive fallout from nuclear weapons tests conducted at the Nevada Test Site. Portions of those fallout areas will be disturbed during construction of the proposed rail line. DOE has not studied these fallout areas to evaluate the potential risk to workers and the public that may result from this residual radioactivity. Nye County is concerned that Nye County has identified its specific rail transportation concerns in its

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comments on DOE'S Draft Nevada Rail Corridor SEIS [DOE/EIS-0250F-S2D, Application Exhibit HI and Draft Rail Alignment EIS [DOE/EIS-0369D, Application Exhibit HI Those comments were attached to Nye County's original comments, filed April 15, 2008, in their entirety, and are incorporated herein by reference. There may be a potential risk to workers and the public as a result of disturbing this residual radioactivity. Accordingly, Nye County respectfully requests that the STB direct DOE to satisfy the following condition as part of any approval of the requested application for public convenience and necessity to construct a rail line Condition 1: Prior to issuing a record of decision (ROD) on the Caliente Corridor, DOE shall complete a radiological survey of those areas of the Caliente corridor that were subject to nuclear weapons test fallout and assess the potential radiological risk to workers and the public during construction.

*[Mineral County]*

[We respectfully request that the following conditions be included as part of STB's approval of the requested actions:] that DOE be directed to accomplish a radiological survey of those areas of the Caliente corridor that were subject to weapons test fallout to determine construction and worker safety impacts.

*[Fallini]*

We support Nye County's recommendation that STB require DOE to conduct a radiological survey of areas of the Caliente Corridor affected by weapons testing before any certificate of public convenience and necessity is approved

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**Subject:** Rail Design

**Summary of Comment(s):** The State of Nevada contends that DOE has not presented a detailed plan with vertical profile for a specific rail alignment within the Caliente corridor. Without a detailed plan and vertical profile it is not possible to conduct a meaningful evaluation of construction feasibility, cost, and impact on the environment

**Response:** This issue was raised during the EIS comment and review process and DOE addressed this issue in the Rail Alignment EIS

The analysis in the Rail Alignment EIS is based on a conceptual design of the rail line. DOE used the best available information to prepare the Rail Alignment EIS. As stated in the CRD Section 3.2 (1361) page CRD3-19, the description of the proposed railroad and the characterization of the Caliente rail alignment is consistent with the level of detail required for a NEPA analysis. Chapter 2 of the EIS contains references to railroad engineering documents in the discussion of construction and operation of the proposed railroad. Reference materials cited in the Rail Alignment EIS contain the details sought by the State of Nevada. Detailed vertical profile drawings are provided in the Plan and Profile Drawings (DIRS 182674-Nevada Rail Partners 2007, all; DIRS 180871-Nevada Rail Partners 2007, all). DOE prepared a Map Atlas (DIRS 185492-DOE 2008, all; DIRS 185510-DOE 2008, all) that includes more than 500 aerial photographs for each rail alignment with overlays of the rail line and its support facilities. Appendix D of the Rail Alignment EIS contains photo simulations of the Caliente rail alignment that show representative and unique areas.

**Comment(s):**

*[State of Nevada]*

DOE has not yet presented a detailed plan with vertical profile for a specific rail alignment within the current Caliente corridor. Without a detailed plan and vertical profile it is not possible to conduct meaningful evaluation of construction feasibility, cost, and impact on the environment. Nevada has prepared a preliminary analysis of the first 100 miles, based on previous DOE and Nevada studies. The first four mountain crossing segments, ranging in length from 7 miles to more than 20 miles, would involve ascending and descending from valley elevations of 4,600 to 5,200 feet, to summit elevations of 5,400 to 6,100 feet. Almost any alignment within the proposed corridor will require grades of 1.3 percent to 2.4 percent for 75 of the first 100 miles, even after extensive cut-and-fill activity. DOE would encounter similar conditions at other locations along the remaining 219 miles.

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**Subject:** Infrastructure Study Prepared by University of Nevada, Reno

**Summary of Comment(s):** State of Nevada commented on the findings from an infrastructure study sponsored by Nevada in 1991 and conducted by the University of Nevada, Reno that evaluated the Union Pacific (UP) mainline through Caliente. This study discussed steep grades and curves requiring speed restrictions, the number of required tunnels, bridges, culverts, the numerous falling rock and flood hazard areas, and bridge washouts resulting in subsequent disruption of rail service.

**Response:**

The Repository SEIS provides analysis of the environmental impacts of transportation of spent nuclear fuel and high-level radioactive wastes on representative national rail routes, including routes in the State of Nevada. Appendix G of the Repository SEIS addresses estimated transportation impacts including risks of an accident on the national rail system (Appendix G, pages G-109 to G-110).

The issues, specified by the State of Nevada pertaining to potential hazards to rail operations in the Rainbow Canyon area, are associated with the national rail network, specifically the Union Pacific Railroad mainline.

With respect to analyzing the environmental impacts of the Caliente Rail Line in the Rail Alignment EIS, the Department considered hydrology, geology, land use, topography, design criteria, natural hazards, and other factors in deriving the suite of alternatives. While refinements to the rail line will continue as design progresses, a partial list of the types of design and engineering factors that DOE has and will continue to consider is presented in Section 2.2, page 2-8.

**Comment(s):**

*[State of Nevada]*

In 1991, a Nevada-sponsored infrastructure study by the University of Nevada, Reno, evaluated the Union Pacific (UP) mainline through Caliente. "The 118-mile study corridor traverses very rugged terrain. The route is confined within the canyon walls of Clover Creek and Meadow Valley Wash. The route exhibits a high degree of curvature as it descends 4,300 ft. from the high plateau at the Utah border to the desert floor beyond the southern end of the study area [Moapa]." The steep grades and tight curves require speed restrictions for trains from the East on the downgrade from the Utah border to Caliente. The study identified 15 tunnels, 107 bridges, 66 culverts, and numerous falling rock and flood hazard areas, along the route. Service disruptions due to track and bridge washouts began soon after the route opened in 1905, and continue to the present time, most recently in January 2005. A 1907 washout at Eccles, east of Caliente, is shown in Figure 7. The 2005 washout west of Caliente is shown in Figure 8. The 2005 washout occurred at a location identified as having a high-probability of flood damage in the 1991 UNR report.

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**Subject:** Resource Impacts

**Summary of Comment(s):** Churchill and Lander Counties contend that the Rail Alignment EIS did not contain sufficient information for the various resource impacts. Furthermore, DOE postponed certain analysis until the construction phase. For example, impacts to cultural resources are largely unknown and will not be fully investigated until construction.

**Response:** This issue was raised during the EIS comment and review process and DOE addressed this issue in the Rail Alignment EIS.

Chapter 2 of the Rail Alignment EIS describes the affected environment for the lands and features involved with each segment and proposed facility. DOE organized the chapter by resource area, so it describes common aspects of the environment for the proposed alignment or alternative segment for a resource first; then it describes the specific aspects of the resource area for each segment and facility area. The resource impact sections for each resource area in Chapter 4 of the Rail Alignment EIS discuss the impacts for Caliente rail line (CRD Section 3.7.1 (4185) page CRD3-115).

As stated in the Rail Alignment EIS in Section 4.2.13.1, because of the length of the proposed rail line along the Caliente rail alignment, DOE is using a phased cultural resource identification and evaluation approach, as described in 36 CFR 800.4(b)(2), to identify specific cultural resources along the alignment. Under this approach, DOE would defer final field surveys (an intensive BLM *Class III inventory*) of the actual construction right-of-way, as provided in the programmatic agreement between DOE, the BLM, the STB, and the Nevada State Historic Preservation Office (DIRS 176912-Wenker et al. 2006, p. 15) (see Appendix M). A Class III inventory is an intensive field survey designed to locate and record all cultural resource sites within a specified area. Upon completion of such an inventory, no further cultural resource inventory work is normally needed in the area. Table 7-1 presents a Best Management Practice that describes compliance with the Programmatic Agreement and Identification Plan that has been developed through the Section 106 consultation process under the National Historic Preservation Act.

**Comment(s):**

**[Churchill County]**

The Rail Alignment EIS did not contain sufficient information for the various resource impacts. There are only general descriptions of the resources being impacted. Furthermore, DOE postponed certain analysis until the construction phase. For example, impacts to cultural resources are largely unknown and will not be fully investigated until construction. Most subject areas are only given cursory treatment.

**[Lander County]**

The Rail Alignment EIS did not contain sufficient information for the various resource impacts. There are only general descriptions of the resources being impacted. Furthermore, DOE postponed certain analysis until the construction phase. For example, impacts to cultural resources are largely unknown and will not be fully investigated until construction. Most subject areas are only given cursory treatment.

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**Subject:** Inventory Module 2

**Summary:** The State of Nevada contends that the DOE Application fails to provide full and accurate details about the radiological characteristics of the commodities to be shipped and the amount of traffic from the 70 sites in 34 states that would ship spent nuclear fuel (SNF) and high-level radioactive waste (HLW) to the proposed Caliente rail line. Additionally, Inventory Module 2 does not include any SNF or HLW shipped from newly constructed nuclear power plants. The STB should direct DOE to amend its Application to accurately reflect how much SNF and HLW it actually expects to ship on the proposed Caliente rail line over 50 years of operation, with and without a second repository, and with and without construction of new nuclear power plants.

**Response:** DOE has addressed this issue in the Rail Alignment EIS.

The radiological characteristics of SNF and HLW are provided in Section K.2.4.2. Inventory Module 2 represents an inventory of radiological materials that would be in excess of DOE's proposed action or legislative authority, however, this inventory was analyzed as a reasonably foreseeable action in Section 5.2.1.2.

**Comment(s):**

*[State of Nevada]*

Details About Traffic and Commodities, 49 C.F.R. §1150.4(b)

The DOE Application fails to provide full and accurate details about the amount of traffic from the 70 sites in 34 states which would ship spent nuclear fuel (SNF) and high-level radioactive waste (HLW) to the proposed Caliente rail line. The amount of expected traffic on the proposed Caliente rail cannot be clearly determined from the information in the application. DOE has chosen not to reveal the radiological characteristics of the "commodities" for which DOE says the rail line is needed. The discussion of expected non-DOE traffic on the proposed rail line is speculative regarding potential use by industries in the area, and silent regarding the much larger potential induced traffic from future users. These cannot be determined at this time.

The number of DOE SNF and HLW shipments to the proposed Caliente rail line could likely be two-and-one-half times greater than the amount stated in the application. DOE would likely ship 24,100 rail casks of SNF, HLW, and other radioactive wastes to Yucca Mountain over 50 years. This would require about 7,100 to 8,000 trains, or an average of 2.7 to 3.1 trains per week for 50 years. DOE calls this the Inventory Module 2 scenario, and describes this scenario in the Draft SEIS (pages 8-31 to 8-33). DOE has chosen not to provide this information in the Application or in the Draft RA EIS (Exhibit 10).

The rail shipment numbers in the Application - 9,500 rail casks in about 2,800 trains - represent about 68,000 MTHM (metric tons of heavy metal) of spent nuclear fuel and high level radioactive waste, less than half the 143,000 MTHM of fuel and waste, and 2,200 canisters of Greater-Than-Class C radioactive wastes, that DOE would ship to Yucca Mountain under Inventory Module 2. Because DOE currently has no plan to develop a second repository, the maximum amount of traffic should be based on Inventory Module 2.



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**Additionally, Inventory Module 2 does not include any nuclear fuel or waste shipped from newly constructed nuclear power plants. The amount of spent fuel shipped to Yucca Mountain would increase dramatically if 20-100 new commercial power reactors were constructed in the United States during the next 50-60 years. The STB should direct DOE to amend its Application to reflect accurately how much spent nuclear fuel and high level nuclear waste it actually expects to ship on the proposed Caliente rail line over 50 years of operation, with and without a second repository, and with and without construction of new nuclear power plants. The Board's NEPA review of DOE's Application should assume the corresponding range of fuel and waste traffic estimates.**

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**Subject:** Perceived Risk – Radiation Exposure

**Summary of Comment(s):** The State of Nevada contends that radiation possesses unique characteristics as a hazard because of the perceived risk of radiation exposure. Clark County states that DOE fails to adequately evaluate and address perceived risk and stigma.

**Response:** This issue was raised during the EIS comment and review process and DOE addressed this issue in the Rail Alignment EIS.

Section 4.1.3 of the Rail Alignment EIS and CRD Section 3.2.6 (94) page CRD3-34, discuss perceived risk and stigma. DOE has considered these issues, guided by the results of its own research, that of the State of Nevada, conclusions from reviews of this subject by the Nuclear Waste Technical Review Board in 1995 and other research including an independent economic study prepared in 2003 (DIRS 172307-Riddell et al. 2003, all). DOE concluded that, at least temporarily, a small relative decline in residential property values might result from the designation of transportation corridors in urban areas. While stigmatization of southern Nevada can be envisioned under some scenarios, it is not inevitable or numerically predictable. DOE has acknowledged that, while in some instances risk perceptions could result in adverse impacts on portions of a local economy, there are no reliable methods for quantification of such impacts with any degree of certainty. Therefore, DOE did not attempt to quantify any potential for impacts from risk perceptions or stigma in the Rail Alignment EIS.

**Comment(s):**

*[State of Nevada]*

Nevada-sponsored studies have found that radiation possesses some unique characteristics as a hazard. One Nevada researcher has grouped these characteristics into the categories of dread, exposure, and familiarity. This paradigm of "riskiness," now widely adopted in the hazards research field, argues that radiation may be riskier than other hazards, because people perceive the risk to be involuntary and uncontrollable (dread). It is reasonable to expect that the public will believe that a large number of people will be exposed to the radiation and that it is a hazard with which they are unfamiliar. Unique local conditions along some potential routes to Yucca Mountain could create elevated radiation exposure zones on private properties, and could constitute at least a 'nuisance' or even an actual 'taking' of property rights, both in terms of lost value and involuntary assignment of risk of radiological exposure. See <http://www.safe.nv.us/nucwastecnews2008/pdf/nv080109seis.pdf>

*[Clark County]*

The DOE asserts that "only a qualitative assessment is possible" when estimating perception-based impacts. See FSEIS for the Yucca Mountain Repository at S. 2, P. 2-88. This assertion is incorrect and ignores significant publications that indicate otherwise. Models that address anticipated human response have evolved to ensure that a quantitative analysis is possible. More specifically, vehicles for collection and methodologies for estimating future impacts on property values were executed using survey-based research that queried financial institutions. In another model supporting these findings, the researchers found "In addition, a full accounting of economic impacts can be reached through modeling forward and backward linkage, the degree of re-spending of dollars with an economy, and spending leakages. Input-output and econometric models have proved useful in accomplishing this task for studying the full impacts of changes in regional economics." Clark County's findings on the importance of adequately addressing socioeconomic impacts were further supported by the report

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issued in 2005 by the National Academy of Sciences entitled "Going the Distance," which encouraged the DOE to pay attention to social impacts associated which may result from this project

The existence of objective models to measure perceived risk do exist, and the literature addressing assessment of stigma impacts is abundant. In its January, 2008 "Comments on the Draft Rail EIS," the State of Nevada concurred noting that substantial research addressing the connection between risk and social behaviors has developed in the last twenty years. See State of Nevada Comments on the Draft Rail EIS, 2008. In essence, the DOE is attempting to circumvent a necessary analysis of perceived risk and stigma—two subjects that require thorough consideration prior to approval of the DOE's Application.

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**Subject:** Perceived Risk – Aural, Aesthetic, & Environmental Character

**Summary of Comment(s):** The Dia Art Foundation states that they continue to oppose any corridor traversing Garden Valley because the negative impacts cannot be mitigated and will cause irreparable damage to the area's aural, aesthetic, and environmental character

**Response:** This issue was raised during the EIS comment and review process and DOE addressed this issue in the Rail Alignment EIS

DOE used several criteria to determine the level of potential impacts from noise and vibration along the rail alignment. For noise impacts from construction activities, DOE used U.S. Department of Transportation, Federal Transit Administration, methods. For operation of trains during the construction and operations phases, DOE analyzed noise impacts under established Surface Transportation Board criteria (Section 4.2.8 1, pages 4-266 and 4-267). DOE concludes that construction noise levels in Garden Valley would be below the Federal Transit Administration noise guidelines and that train noise during operations would not exceed train noise impact criteria under Surface Transportation Board noise regulations (49 CFR 1105.7(e)(6)) (Section 4.2.8, pages 4-266 and 4-287).

Based on the analysis of impacts to aesthetic resources, DOE concludes in the CRD 3.7.10 (1093) page CRD3-222 that the finished rail line would not attract the attention of the casual observer where the line is more than one mile away. Nonetheless, DOE has committed to constructing low, rolling earthwork berms with soils and vegetation that match the surroundings to mask the rail line in places where it would otherwise create a linear feature that would begin to attract attention of viewers in Garden Valley, and implementing other Best Management Practices and mitigations outlined in Tables 7-1 and 7-2 of the Rail Alignment EIS.

**Comment(s):**

*[Dia Foundation]*

Dia recognizes DOE's attempt to mitigate the negative impacts of the Caliente Rail Corridor in Garden Valley through its preferred Garden Valley Alternate 3 which runs furthest from City. However, we continue to oppose any corridor traversing Garden Valley because the negative impacts cannot be mitigated and will cause irreparable damage to the area's aural, aesthetic, and environmental character.

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**Subject:** Shared Use

**Summary of Comment(s):** The Timbisha Shoshone Tribe contends that DOE failed to analyze the impacts of the shared use line or induced traffic

**Response:** This issue was raised during the EIS comment and review process and DOE addressed this issue in the Rail Alignment EIS.

Induced traffic is addressed in the CRD Section 3.4.3 (919) page CRD3-57. Environmental impacts of shared use are discussed in Chapter 4 of the Rail Alignment EIS. The current analysis of the Shared-Use option is a conservative estimate of the potential shippers that could operate along the proposed railroad. It is based upon interviews with and studies of the business and industry along the rail line that have the potential to utilize the railroad. The content of the Rail Alignment EIS is consistent with NEPA requirements.

**Comment(s):**

*[Timbisha Shoshone Tribe]*

Consequences of a shared use line. DOE states that the CRA may be used for multiple uses by other parties and agencies, making this a "shared use" line. However, the DOE does not analyze the implications of these shared uses. There is no indication of what agencies will be using the rail line. If other federal agencies will use the rail line, these agencies should have a role in the NEPA proceedings.

*[Timbisha Shoshone Tribe]*

Induced traffic and development. The DOE has opened the possibility of opening the CRA for use by commercial rail traffic. The expectation is that increased access to the region will create "induced traffic." That is traffic that is created by the increased access. If the CRA rail line is to be a shared use line, then the DOE should assess all of the implications of the shared use line. This should include the environmental impacts of shared uses on the CRA.

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**APPENDIX B**

**Mitigation Comments & Responses**

## Appendix B Mitigation Comments & Responses

### INTRODUCTION

Some parties requested that the Board place conditions on the certificates of public convenience and necessity requiring certain mitigation measures. This appendix presents the mitigation measures requested by the parties and DOE's response to those proposed measures. The comments and DOE's responses are grouped in this appendix by subject area or by the potentially impacted resource for which mitigation is suggested.

An overview description of DOE's approach to mitigation is included in Section E of this Reply. In summary, DOE identifies in Chapter 7 of the Rail Alignment EIS preliminary best management practices in Section 7.2 and Table 7-1 pages 7-14 to 7-39 and mitigation measures in Section 7-3 and Table 7-2 pages 7-40 to 7-51. Those measures will be further developed in conjunction with regulatory agencies and directly affected parties during upcoming phases of design and development of the rail line. To that end, DOE proposes to constitute one or more Mitigation Advisory Boards to assist the DOE, this Board, and the Bureau of Land Management in developing, implementing, and monitoring best management practices and mitigation measures during construction and operation of the Caliente Rail Line.

Most comments related to mitigation submitted on the Application are the same or very similar to the comments submitted by those or other parties on the Draft Rail Alignment EIS<sup>1</sup>. DOE considered those comments on the Draft Rail Alignment EIS and in many cases expanded its range of mitigation measures in the Rail Alignment EIS to include those suggested by commenters. Thus, DOE has already committed to implementing many of the mitigation measures suggested by parties. In those cases, the following sections of this Appendix identify where in the Rail Alignment EIS the mitigation measures are described. In some other cases, DOE acknowledges in this appendix that the proposed mitigation measures will be of the type considered and further developed during the mitigation process described in Chapter 7 pages 7-1 to 7-9 of the Rail Alignment EIS. Finally, some proposed measures are inappropriate and DOE cannot agree to them.

Comment responses presented in Appendix B include information from environmental impact statements prepared by the Office of Civilian Radioactive Waste Management (OCRWM). A list of these documents is provided in Appendix A. The source document primarily used to respond to comments in Appendix B is the Rail Alignment EIS. Therefore, unless otherwise noted, references to sections and tables in the text of Appendix B comment responses correspond to the Rail Alignment EIS, including the comment response document.

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<sup>1</sup> Mitigation comments were captured in one of two summary comment responses within the Comment Response Document (CRD) Section 3.12, Impact Mitigation and Compensation 3.12 (139) pages CRD3-263 to CRD3-264 and 3.12 (4186) pages CRD3-264 to CRD3-267.

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**Subject:** Access

**Summary of Comment(s):** Lincoln County and the N-4 Grazing Board both stipulated the need for access to fields and pastures and safe movement of equipment during construction and operation of the rail line. If access required development of new roads, appropriate mitigation and monitoring measures should follow. Access to isolated parcels could necessitate maintenance of existing fencing, installation of new fencing, and additional road maintenance operations.

**Response:** The proposed mitigation measures are specifically addressed in Table 7-2 [9] page 7-42 and [12] page 7-43, or will be covered by the mitigation process described in Chapter 7 pages 7-1 to 7-9

**Comment(s):**

*[Lincoln County]*

1 15 Provision of alternative access to isolated parcels To provide access for the safe movement of farm equipment to fields and pastures which otherwise would have to operate on public highways, as a result of road closures during and following construction and during operation of the Caliente Rail Alignment, DOE shall provide or develop appropriate alternative access to these fields and pastures. Alternatives for access could include development of frontage roads adjacent to yard boundaries, agreements for farmers to coordinate with the yard master to cross through the yard, if rail operations and safety conditions permit, or development of additional access roads.

DOE should be required to plan and implement appropriate mitigation and monitoring measures if additional access roads are built. Providing alternative access to these isolated parcels will create a need for more maintenance of existing fencing and require additional new fencing to facilitate continuing operations. Allowing new access ways into these isolated parcels will require additional road maintenance operations.

*[N-4 State Grazing Board]*

Same as above



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**Subject:** Aesthetics

**Summary of Comment(s):** *Lincoln County and the N-4 State Grazing Board stated that DOE should be required to minimize visual impacts to surrounding lands, including placing native vegetation on berms around the staging yard*

**Response:** The proposed mitigation measures are generally addressed in Table 7-1 [1] page 7-14, [17] page 7-19, [27] page 7-23, [31] page 7-24, [32] page 7-25 and Table 7-2 [18] through [22] pages 7-44 to 7-45.

DOE disagrees that it should commit to using vegetated berms around the staging yard because this may not be the most effective measure for minimizing the visual impacts of that facility. DOE has committed to minimizing the visual impacts of facilities (Table 7-2 [20] page 7-44) and will work with directly affected parties during upcoming design phases to develop an appropriate method for minimizing those impacts

**Comment(s):**

*[Lincoln County]*

3.3 Minimize visual impacts to surrounding lands DOE should be required to design the staging yard and related facilities and structures in a manner that blends with the natural environment and fits with the local architecture. DOE should be required to place native vegetation on berms around the staging yard to soften the visual impact to adjacent lands DOE should adopt a protocol to minimize cuts and fills and areas that will be cleared of vegetation during construction.

*[N-4 State Grazing Board]*

Same as above

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**Subject:** Air Quality

**Summary of Comment(s):** Lincoln County suggested that DOE should commit to specific measures to limit emissions from the construction and operation of the rail line in Lincoln County

**Response:** The proposed mitigation measures 1 through 3 below are specifically addressed in Table 7-1 [6] through [9] pages 7-15 through 7-16 with the exception of the intermodal facility which is not a consideration in the Rail Alignment EIS

DOE disagrees with the proposed mitigation measures 4 through 9 below. As summarized in Section 4.2.4.6 page 4-124 of the Rail Alignment EIS, impacts of constructing and operating the railroad on air quality will be small and the project will not cause conflicts with state or regional air quality management plans. DOE will obtain all required surface-disturbance and air-quality-operating permits and will implement all required measures to ensure that concentrations of air pollutants do not exceed national ambient air quality standards. Thus, additional obligations to implement the programs outlined below to off-set additional unavoidable emissions are not necessary and far exceed the requirements placed on similar projects having small impacts on air quality.

**Comment(s):**

*[Lincoln County]*

Measures that DOE should undertake to limit emissions and seek to maintain air quality in Lincoln County at its current high quality include:

- 1) Requiring all trucks, other vehicles, and locomotives associated with the repository to use the best available emissions control technology and to undergo regular emissions control testing to meet stringent standards.
- 2) Setting strict limits on truck and locomotive idling
- 3) During construction of the intermodal facility, new rail lines and road improvements or maintenance, implement practices to minimize fugitive dust, including spraying roads, construction sites, and earth movement sites with water

*[Lincoln County]*

In addition to a commitment to avoid emissions associated with construction and operation of the Caliente Rail Alignment through Lincoln County, DOE should be required to implement programs to off-set additional unavoidable emissions. The goal of the DOE off-set program should be to keep total emissions in Lincoln County at or below current levels. Examples of such programs include:

- 4) Help for businesses and residences (existing and new) to control emissions at no additional cost to the property owners and tenants. This could include assistance with emissions control technology, and the purchase of more efficient appliances and education about techniques for improving efficiency.
- 5) Providing assistance to residents to insulate their homes, purchase more efficient appliances, and improve overall efficiency.
- 6) Assistance for local citizens with emissions control technology on their personal vehicles and general maintenance to reduce emissions with an emphasis on the "high emitters."
- 7) Assistance to County in paving dirt roads

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- 8) Assistance to County with landscaping of barren areas
- 9) Reduction of non-Caliente Rail Alignment related vehicle trips through enhanced pedestrian and bicycle trails

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**Subject:** Construction Coordination

**Summary of Comment(s):** Lincoln County and the N-4 State Grazing Board request the DOE provide construction and train schedules to all directly affected parties. They request a "community liaison to consult with affected communities, farmers, ranchers, businesses, landowners, and agencies; develop cooperative solutions to local concerns, be available for public meetings, conduct periodic public outreach, and assist communities and other entities in establishing quiet zones." They are also requesting a voice in the location of construction camps as well as their disposition upon completion of construction.

**Response:** The proposed mitigation measures are specifically addressed in Table 7-1 [36] page 7-27 and Table 7-2 [15] page 7-43, [28] page 7-47, and [36] page 7-49, or will be covered by the mitigation process described in Chapter 7 pages 7-1 to 7-9. CRD responses 3 12 (139) pages CRD3-263 to CRD3-264 and 3 12 (4186) pages CRD3-264 to CRD3-267 provide additional explanation.

Additional detail on providing train schedules is addressed in Rail Alignment EIS, Volume V, Appendix L - Supplemental Transportation Information, L.2 Transportation Regulations, Page L-4, L 2 5 Advance Notification.

**Comment(s):**

*[Lincoln County]*

1.16 Provision of construction schedule to agricultural producers. DOE must provide its project-related construction schedule to affected farmers and ranchers to allow them to determine whether they should continue to crop or graze in right-of-way areas or discontinue such activities due to impending construction and reconstruction activities. Notification should also be made to Lincoln County officials, Lincoln County Sheriff, local ambulance services and EMS providers, and other public officials to facilitate safety and medical services as needed to the construction operations.

*[N-4 State Grazing Board]*

Same as above

*[Lincoln County]*

1.17 Establish Community Liaison to coordinate with impacted parties. As a condition to the certificate, prior to initiation of construction or reconstruction activities related to this project, DOE should establish community liaisons to consult with affected communities, farmers, ranchers, businesses, landowners, and agencies, develop cooperative solutions to local concerns, be available for public meetings, conduct periodic public outreach, and assist communities and other entities in establishing quiet zones. Such assistance may include coordination with the Federal Railroad Administration ("FRA") for identification of appropriate supplemental and alternative safety measures at grade crossings where quiet zones are desired, identifying potential sources of funding, providing assistance preparing funding applications and grant requests, and coordinating with representatives of potential lending organizations. The Community Liaison(s) shall have access to DOE's upper management. DOE shall provide the name and phone number of the Community Liaison(s) to County Commissioners and other appropriate local officials in each local jurisdiction through which the new rail line passes. The Community Liaison also must have authority to provide information on anticipated train schedules to farmers and ranchers to facilitate movement of equipment or livestock from one side of the rail line to

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the other

*[N-4 State Grazing Board]*

Same as above

*[Lincoln County]*

3 1 Location of construction camps closely coordinated with local government To minimize adverse and maximize beneficial impacts associated with DOE planned construction camps in Lincoln County, the location and post-construction disposition of all camps should be closely coordinated with the County

*[N-4 State Grazing Board]*

Same as above

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**Subject:** Construction Water

**Summary of Comment(s):** Lincoln County and the N-4 State Grazing Board stated that the use of above-ground water storage tanks with standpipes to reduce the level of disturbance and conserve water by minimizing leakage and evaporation should be required of DOE

**Response:** The proposed mitigation measure could be addressed as part of the mitigation process described in Chapter 7 and Table 7-1 [20] page 7-20

The specific storage method DOE would implement during construction would depend on the method that best meets the daily demand and fulfills the DOE commitment to minimize impacts

**Comment(s):**

*[Lincoln County]*

3 2 Minimize land disturbance and water usage The use of above-ground water storage tanks with standpipes to reduce the level of disturbance and conserve water by minimizing leakage and evaporation should be required

*[N-4 State Grazing Board]*

Same as above.

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**Subject:** Education

**Summary of Comment(s):** Lincoln County contends that DOE should fund the Lincoln County School District to monitor impacts and changes in student populations and demands due to the construction and operation of the repository system. Furthermore, if monitoring indicates that the school system is experiencing additional demands, DOE should commit, in advance, to providing funds to expand school facilities, purchase equipment, and hire additional staff.

**Response:** DOE disagrees with the proposed requirements for establishing specific stipulations such as providing funding to the school district to monitor impacts, expanding existing schools, and purchasing additional equipment at this time because the potential impacts to the School District identified by Lincoln County are a perceived risk that is uncertain to occur. DOE cannot commit to providing advance funding to mitigate such potential or perceived risks.

However, as stated in Table 7-2 [35] page 7-49 DOE has committed to reducing impacts to local infrastructure and community services such as the School District and will develop appropriate mitigations with the directly affected parties. As stated in Table 7-2 [36] page 7-49, "If additional services are required, DOE would work with local communities and counties to determine if there are mutually beneficial actions or improvements." and in the CRD Section 3.7.7 (1150) page CRD3-190, "DOE would establish, in conjunction with affected counties, monitoring programs to evaluate future impacts and potential mitigation measures."

**Comment(s):**

*[Lincoln County]*

7.7.1 DOE should provide the Lincoln County School District with funding to monitor impacts and changes in student populations and demands due to the repository system.

*[Lincoln County]*

7.7.2 DOE should reimburse the School District for the cost of educating additional students induced by repository system construction and operation.

*[Lincoln County]*

7.7.3 DOE should commit in advance to provide funds to expand school facilities, purchase equipment, and hire additional staff if monitoring indicates that the school system is experiencing additional demands due to the repository system.

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**Subject:** Emergency Services

**Summary of Comment(s):** Lincoln County requests technical assistance, notification of construction and train schedules, and funding to support emergency response planning, training, personnel, and specialized equipment

Clark County expressed concern that the DOE failed to study Clark County's public safety and emergency management system impacts and that they would be required to provide emergency services and response without compensation. They also stated that DOE does not understand the training requirements for first responders or the capabilities of Clark County and State of Nevada responders.

**Response:** DOE has specifically addressed the following proposed mitigation measures from Lincoln County and Clark County.

- Preparation of radiological emergency evacuation plans are specifically addressed in Table 7-1 [49] page 7-32
- Provision of construction schedule and related contact person information is specifically addressed in Table 7-1 [36] page 7-27, [48] page 7-31, and [50] page 7-32
- Provision of technical support is specifically addressed in Table 7-1 [51] page 7-33
- Upgrade of emergency response equipment, provision of specialized equipment, expanding staffing, training of staff, funding for overtime and unanticipated response costs, and provision of funding to remodel/expand medical facilities is specifically addressed in Table 7 2 [35] & [36] page 7-49 & [42] page 7-50
- Coordination/notification of train movements is specifically addressed in Appendix L, L.4 5 page L-10 and L6 page L-15
- Support to county and local governments regarding emergency services is addressed in CRD 2 7 (4164). DOE recognizes that construction and operation of the proposed railroad could directly affect a number of parties, as discussed in Chapter 4 of the Rail Alignment EIS. Chapter 7 of the EIS sets forth the policy and lays out the steps DOE would follow in the longer-term mitigation process to develop, jointly with directly affected parties, measures that could be implemented and their effectiveness monitored.

**Comment(s):**

*[Lincoln County]*

6 1 Upgrade emergency response equipment DOE funding to upgrade current emergency response equipment to handle additional emergency situations (including fire and medical response capabilities) due to a larger population base and accidents associated with the construction and operation of a rail spur line, the staging yard and construction camps.

*[Lincoln County]*

6 2 Provide specialized equipment DOE funding to purchase the necessary equipment to enable the

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County to provide early response to handle an incident involving the release of radioactive material into the environment and human contamination

*[Lincoln County]*

6 3 Expand staffing DOE funding to assist in establishing at least a modest paid full time emergency response staff and continuing grants to maintain said staff

*[Lincoln County]*

6 4 Training of staff DOE funding to enable ongoing training for the emergency management/medical personnel, including hospital staff, and to cover special training for handling of radiation contaminated patients, radioactive material handling and evacuation/crowd control training In addition, DOE should fund training of doctors, medical staff, emergency response personnel and ambulance attendants in Lincoln County to identify radiation sickness and DOE must provide funding to the Grover C Dils Medical Center so that the hospital has the capability to isolate patients and treat them for radiation exposure

*[Lincoln County]*

6 5 Funding for overtime and unanticipated response costs. A contingency for grants to cover additional staff time and equipment in the event of a radiological emergency must be established by DOE.

*[Lincoln County]*

6 6 Preparation of radiological emergency evacuation plans. DOE funding and technical assistance for developing and publicizing evacuation plans for Lincoln County communities The evacuation plan should include route planning, emergency personnel coordination, public education, acquisition of emergency signal and communication equipment, acquisition of vehicles needed for evacuating students, hospital patients, elderly persons and others with special needs

*[Lincoln County]*

6.7 Provision of construction schedule and related contact person information At least one month prior to initiation of construction activities in the area, DOE shall provide the information described below, as well as any additional information, as appropriate, to each local emergency response organization or other similar body for communities within the project area regarding project-related construction and operation of both the new and existing rail line

- The schedule for construction throughout the project area, including the sequence of construction of public grade crossings and approximate schedule for these activities at each crossing.
- Expected schedule for any changes in rail line operations along DOE's system, including when changes in train speeds and levels of traffic are anticipated to occur, and current and new train speeds and levels of rail traffic
- A toll-free number for the DOE's contact who shall be available to answer
- Questions or attend meetings for the purpose of informing emergency-service providers about the project construction and operation

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- Revisions to this information, including changes in construction schedule, as appropriate

***[Lincoln County]***

**6.8 Coordination/notification of train movements** DOE shall consult with the Board of Lincoln County Commissioners and representatives of affected communities that so request, to coordinate train movements and emergency response and discuss the possible installation by DOE of a state-of-the-art electronic display board, or equivalent technology, such as a real time or Global Positioning System (GPS) train location monitoring system in the local emergency-response center of each community showing the location of trains and/or the position of grade crossing warning signals

***[Lincoln County]***

**6.9 Provision of technical support** In addition to financial support and training, DOE should be required to take a proactive and positive role in helping Lincoln County with emergency planning for a radiological event. This includes.

- a) Providing guidance for appropriate levels of community preparedness, training, equipment, and response procedures
- b) Clarifying responsibilities in response planning between the federal, state, and local governments, as well as between federal agencies, such as FEMA, DOE, and EPA
- c) Taking responsibility to ensure (perhaps through certification training) that the local governments have the necessary training and equipment to handle an accident involving a radiological release

Back-up emergency help is at the present a long way off. Three hours is the minimum drive time for additional emergency personnel and equipment to arrive from Las Vegas. Under these circumstances, DOE needs to be required to evaluate

- a) If there are upgrades to dirt roads or cut-through routes that could be established which would reduce the drive time between NTS, Las Vegas and Lincoln County communities. For example, improvements to Kane Springs Road and access through Gate 700 from the Nevada Test Site through the Nevada Test and Training Range to the Rachel area.
- b) Which critical heavy or large equipment should be stored in Lincoln County so that personnel being flown in via small plane or helicopter would have the necessary equipment without the delay of waiting for trucks to arrive.
- c) Strategically locating adequate DOE emergency response capabilities along transport routes

***[Lincoln County]***

**6.10 Provision of funding to remodel/expand medical facilities** DOE should provide funds to upgrade hospital facilities and to accommodate the additional demands for basic and radiological related service. This would include DOE funding to modify hospital facilities to provide the capability for radiological quarantine in the event that persons contaminated with radiation are admitted for initial treatment

***[Clark County]***

Clark County owns and operates the University Medical Center, with the only Level One Trauma Unit, Burn Unit, and the only radiological decontamination unit in the region. Further, Clark County plays a critical role in regional first response and emergency management, protection of critical infrastructure including transportation, and, most importantly, provides the majority of revenue and economic base

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for the benefit of the entire state of Nevada. In effect, Clark County will be expected to play a major role in supporting an activity for which it will receive no economic benefit. Clark County's recent commodity flow study for rail shipments revealed that over 70% of the hazardous material commodities on the Union Pacific line pass through Clark County and add nothing to the economy, but require preparedness and response from first responders in case of an incident. Clark County would find itself in a similar position with any Yucca Mountain-bound shipments.

*[Clark County]*

Clark County has explicitly requested that the DOE examine impacts on the County's public safety and emergency management system from the transportation of HLNW through or near the County. Clark County's formal comment on the deficiencies of the lack of analysis by the DOE began with the scoping of the various EIS's in 1995. The County also asserted concerns and recommendations for studying these impacts in comments submitted regarding the Draft Rail EIS and for the DSEIS for a Geologic Repository. In commenting on the deficiencies of the two EIS's, the County noted that the DOE failed to include a viable alternative to the Caliente rail route, which made the likelihood of a large truck transportation campaign through Clark County more probable. The State of Nevada agreed, and reiterated that the number of rail and truck shipments through Clark County would increase substantially if the Caliente rail route could not be constructed. Hence, while the DOE estimated approximately 8% of the total rail rail-cask shipments would travel through Las Vegas on the Union Pacific line under the proposal, the failure of the Caliente line would increase this rail traffic to about 45% of the total rail cask shipments according to the State of Nevada.<sup>3</sup> See State of Nevada Comments on the "Draft Rail EIS" at P.8.

*[Clark County]*

The vulnerability of the Clark County Public Safety system and its emergency management capacity has never received significant analysis by the DOE in any of its impact assessment reports. This analytical void persists despite the continued insistence by Clark County, its local jurisdictions and the State of Nevada.<sup>4</sup> The magnitude of the dollar cost estimates provided by these Clark County studies demonstrates a large public safety need for personnel, equipment and training because of the nature of the shipments. The DOE has failed to consider potential impacts on the public safety system in Clark County, or evaluate the status of existing critical infrastructure and key resources (CI-KR) in Clark County. Clark County is undertaking the inventorying of its critical infrastructure and key resources utilizing the Department of Homeland Security guidelines. By having its CI-KR accessible and geo-coded for public safety personnel and responders, the County will be better able to prepare for and respond to incidents involving HLNW. Yet, no examination of response, resources or needs relative to safety disasters is included in the Application.

*[Clark County]*

The DOE plans on providing training to emergency response personnel through the Modular Response Radiological Transportation Training (MERRTT) and by using train-the-trainer dissemination methods. This MERRTT program is a 16 hour (2 day) program designed to enhance existing emergency response capabilities to radiological materials incidents. Current Nevada and Clark County responders and public safety personnel training varies significantly depending on the job description of an individual, and the amount of hazardous materials capacity among responders in a jurisdiction. Requirements in 29 CFR 1910.120 mandate that all first responders receive hazardous materials training prior to being placed in the field. The level of training among most first responders, depending on their function varies in Nevada between forty (40) and three hundred (300) hours. The DOE has not carried out an

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assessment of current capacity at the local level. Additionally, the DOE is unaware of the current level of training with regard to hazardous materials and radiological materials—particularly in Clark County and rural counties in Nevada. Therefore, the DOE has no method of determining the level of training needs among different types of first respondent. The DOE does not know if its MERRTT training is sufficient because needs will vary according to past training and the first responder's job responsibilities. Finally, training-the-trainer must be tracked to make certain that the requisite level of personnel receive training based on need and job function. The DOE has not addressed these needs in their application.

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**Subject:** Facilities

**Summary of Comment(s):** The City of Caliente expressed that DOE should consult with directly affected cities and counties to determine placement of sidings

**Response:** The proposed mitigation measure could be addressed as part of the mitigation process described in Chapter 7

In implementing the Shared-Use option, DOE acknowledges that team track and industry track sidings could be installed as a third track parallel to passing sidings. “While siding spacing is heavily influenced by train traffic projections and the geometry of the rail alignment, DOE would monitor variables in siding spacing, such as changes in alignment design and traffic expectations, throughout the evolution of the design from conceptual to final to ensure that siding spacing in the final design was appropriate for the rail line.” CRD 3 6 2 (131) page CRD3-84

**Comment(s):**

*[City of Caliente]*

The DOE is required to consult with directly affected cities and counties to determine the appropriate placement of sidings to maximize the economic benefits of the railroad in order to help mitigate potential negative socioeconomic impacts to these communities

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**Subject:** Fencing

**Summary of Comment(s):** Lincoln County and the N-4 State Grazing Board request mitigation of fencing breaches to protect livestock

**Response:** The proposed mitigation measures are specifically addressed in Table 7-1 [2] page 7-14, [27] page 7-23, and [33] page 7-26 and Table 7-2 [12] page 7-43 and [14] page 7-43

**Comment(s):**

*[Lincoln County]*

1.1 Maintenance of existing fencing The Caliente Rail Corridor will cross existing pasture and allotment fences Sections of the fence will need to be removed to allow for construction activities Once there is a hole in the fence it is ineffective Therefore, the integrity of the pasture or allotment is lost, livestock will trespass onto other allotments or be lost. Without some form of mitigation this would render many allotments useless until construction is complete (4-10 years)

*[N-4 State Grazing Board]*

Same as above

*[Lincoln County]*

1.2 Right-of-way fencing Some allotments rely on fencing to manage livestock The rail line and access roads would punch holes through existing fences, rendering the entire fence ineffective, resulting in the loss of livestock The operational right-of-way will result in a hole in every allotment or pasture fence that it crosses unless some form of mitigation is completed. Typically railroads will fence the right-of-way and tie into allotment or pasture fences to ensure no holes are left If the right-of-way was fenced it would have to be done in such a manner as to allow wildlife crossing while preventing a breach from livestock

*[N-4 State Grazing Board]*

Same as above

*[Lincoln County]*

1.3 Construction Area Temporary Fencing/Delineation An important mitigation would be temporary fencing or other delineation of the immediate areas of authorized construction disturbance to avoid any larger than necessary land disturbance.

*[N-4 State Grazing Board]*

Same as above

*[Lincoln County]*

1.5 In-road cattle guards and gates at exiting fence crossings Access road(s) associated with the rail would provide another means by which livestock could cross through existing fences If the right-of-way is not fenced, or if the access roads are outside of such a fence, then the only way to prevent a breach is to install a cattle guard or gates Cattle guards are preferred as they require less maintenance, and minimize the chance of passers-by leaving gates open. It is standard practice to install a gate next to each cattle guard in order to allow passage of livestock when needed or for access by large or tracked

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equipment in order to prevent damage to the cattle guard.

*[N-4 State Grazing Board]*

Same as above

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**Subject:** Fire Suppression

**Summary of Comment(s):** Lincoln County and the N-4 State Grazing Board request that DOE have a fire prevention plan that include prevention, suppression, and land restoration during the construction and operation of the rail line. They also request that rail infrastructure include the latest technology and practices to reduce the threat of wildfires caused by the railroad.

**Response:** The proposed mitigation measures are specifically addressed in Table 7-1 [52] page 7-33 and Table 7-2 [37] page 7-50.

**Comment(s):**

*[Lincoln County]*

120 Fire Prevention. Many of the plants located near the proposed rail line are susceptible to fire. Moreover, in seasons with high rainfall, combustible growth and the threat of wildfires are increasing. Once burned, it may be difficult or impossible to reestablish a community of native vegetation. To minimize the loss of vegetation due to wildfire, prior to initiating any construction activities related to this project, DOE must be required, in consultation with the Natural Resource Conservation Service, local grazing organizations, appropriate State of Nevada and Federal agencies, and local fire and emergency response departments, to develop an adequate plan for fire prevention and suppression and subsequent land restoration, including natural habitats, during construction and operation of the new rail line. DOE's plan must ensure that all rail infrastructure be selected and procured, and operated with the best technology and operational practices to reduce the threat of wildfires caused by the railroad. For instance, locomotives should be equipped with functioning spark arresters on exhaust stacks, fire extinguishers suitable for flammable liquid fires, and low-spark brake shoes.

*[N-4 State Grazing Board]*

Same as above



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**Subject:** Garden Valley Noise Impacts

**Summary of Comment(s):** The Dia Art Foundation stated that the analysis of noise impacts in the Rail Alignment EIS is insufficient and that there will be devastating impacts to the soundscape in Garden Valley

**Response:** Reducing impacts of noise is specifically addressed in Table 7-1 [35] through [37] page 7-27 and Table 7-2 [31] through [34] page 7-48

DOE conducted analysis of the noise impacts as described in Section 4.2.8.1 page 4-266 and Garden Valley is specifically addressed in Section 4.2.8.3.3 page 4-277. DOE specifically refers to the opposing viewpoint presented by the Dia Art Foundation regarding ambient noise levels in Garden Valley in Section 4.2.8.5 page 4-287. Further technical discussion of this issue is covered in Appendix A.

**Comment(s):**

*[Dia Art Foundation]*

DOE's insufficient analysis of increased traffic under the shared-use Rail Line scenario. Among the many devastating impacts will be the tremendous negative impact to Garden Valley's natural soundscape where ambient noise hovers about 15 dBA, a level so low that special equipment was needed to measure it. (As comparison, typical quiet suburban areas far from major roadways will often be around 30 dBA in the late night hours.)

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**Subject:** Groundwater Monitoring

**Summary of Comment(s):** Lincoln County and the N-4 State Grazing Board have requested that the Surface Transportation Board include a set of conditions in a Certificate for contracting of an impartial third-party representative to monitor all existing privately held water rights or water base properties

**Response:** Retaining a third-party contractor to assist in the monitoring and enforcement of mitigation measures is specifically addressed in Table 7-2 [2] page 7-40.

DOE disagrees with the proposed mitigation to monitor all existing privately held water rights or water base properties because it would be unreasonable and excessive. As stated in Table 7-1 [23] page 7-21, DOE is committed to monitoring water levels in existing wells and monitoring discharge rates of springs, where appropriate, to verify the effects, if any, of the proposed groundwater withdrawal on those wells and springs. However, DOE does not believe that it is reasonable to monitor all existing privately held water rights or water base properties. Instead, DOE proposes monitoring of those wells, springs, and other water sources that modeling has indicated may be affected, and to work with holders of water rights along the alignment to identify any other sensitive water sources that may need to be monitored.

**Comment(s):**

*[Lincoln County]*

1.8 Water rights and water base property. Water rights held by grazing permittees are considered to be private property rights under State of Nevada Water Law. Those allotments that are water based have an added layer of private property ownership under the Taylor Grazing Act. As such, potential impacts must be mitigated. Direct impacts may result from construction or operation of the rail, however, significant indirect impacts could occur as a result of pumping by DOE for construction water. DOE should be responsible for contracting an impartial third-party representative to monitor all existing privately held water rights or water base properties. Monitoring should be conducted prior to construction, and continue until groundwater pumping is complete.

*[N-4 State Grazing Board]*

Same as above

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**Subject:** Housing and Tourism Perceived Risk

**Summary of Comment(s):** Lincoln and White Pine Counties commented that DOE should pay for monitoring of tourism levels and property values in that county, and should compensate the County, businesses, and property owners if they may be affected by a potential drop in tourism or by the potential for stigma-induced impacts to property values. Lincoln County also stated that DOE should fund a standby tourism marketing campaign to be implemented following any accident involving a radioactive waste shipment.

**Response:** DOE disagrees with the proposed mitigation measure to fund monitoring or provide compensation for potential impacts of such perceived risks.

Section 4.1.3 of the Rail Alignment EIS, including the Comment Response Document (Section 3.2.6 (94) p. CRD3-34), discusses perceived risk and stigma. DOE has considered these issues, guided by the results of its own research and that of the State of Nevada, and by appropriate conclusions from reviews of this subject by the Nuclear Waste Technical Review Board in 1995 and other research that includes an independent economic study prepared in 2003 (DIRS 172307-Riddell et al. 2003, all). DOE concluded that, at least temporarily, a small relative decline in residential property values might result from the designation of transportation corridors in urban areas. While stigmatization of southern Nevada can be envisioned under some scenarios, it is not inevitable or numerically predictable. DOE has acknowledged that, while in some instances risk perceptions could result in adverse impacts on portions of a local economy, there are no reliable methods for quantification of such impacts with any degree of certainty. Therefore, DOE did not attempt to quantify any potential for impacts from risk perceptions or stigma in the Rail Alignment EIS.

**Comment(s):**

*[Lincoln County]*

7.9.1 DOE should assist Lincoln County in developing and funding implementation of a comprehensive monitoring system to detect if there are negative impacts on tourism in Lincoln County due to the Caliente Rail Alignment. The monitoring system should be capable of detecting changes in tourism under no incident/accident conditions as well as in the event of a transportation incident/accident.

*[Lincoln County]*

7.9.2 Set in place clear trigger points at which predetermined mechanisms for compensating businesses and Lincoln County affected by a potential drop in tourism, both short term and long term would be implemented. The compensation package should address both no incident/accident scenarios as well as incident/accident-related declines in tourism.

*[Lincoln County]*

7.9.3 DOE should assist Lincoln County in developing and funding a standby tourism marketing campaign to be implemented immediately in the event of an incident/accident involving a radioactive waste shipment in Lincoln.

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***[Lincoln County]***

The DOE should implement the following measures to mitigate the potential for stigma-induced impacts to property values in Lincoln County

7 10 1 1 Establish pre-project property value data-base

7 10 2 Monitor for changes in property values along the transportation corridor

7.10.3 Monitor for changes in property values throughout the County.

7.10.4 Set in place clear impact threshold criteria that will trigger compensation to property owners for lost valuation and Lincoln County and the City of Caliente for lost property tax revenues, and establish related mechanisms for compensation

***[White Pine County]***

The economy of White Pine County and its principal community, the City of Ely, is heavily dependent upon vehicular traffic and related traveler services along U S 93, U S 6 and SR 318, all of which will be crossed by the Caliente Rail alignment in neighboring Lincoln and Nye counties. In the event that a rail incident/accident involving nuclear waste were to occur along the Caliente Rail alignment in the vicinity of U S 93, U S 6 or SR 318 it is possible that media amplified negative public perceptions of risk may significantly reduce, at least on a temporary basis, highway traffic through White Pine County and the City of Ely. Such a reduction in traffic would result in reductions in traveler spending and related fiscal impacts to the County and City. In its recent Rail Alignment DEIS and recently released Rail Alignment FEIS, DOE elected not to analyze in any detail potential impacts associated with Rail Alignment related public perception of risks and related stigma

***[White Pine County]***

In the event of an accident along the Caliente Rail Alignment in the vicinity of U S 93, U S 6 or SR 318, traffic along these highways may be reduced for some unknown period of time. An incident involving little risk of exposure but receiving wide media coverage could result in stigma-induced reductions in traffic along these highways. Measures to mitigate the impacts of negative perceptions of risk and stigma related to the Caliente Rail alignment might include. DOE should assist White Pine County in developing and implementation of a monitoring system to detect if there are negative impacts on traveler related economic and fiscal activity due to the Caliente Rail Alignment. The monitoring system should be capable of detecting changes in traffic and related spending under non incident/accident conditions as well as in the event of a transportation incident/accident. Impact thresholds should be established at which predetermined mechanisms for compensating businesses and local government impacted by reductions in traffic and traveler related economic and fiscal activity. DOE should assist White Pine County in developing and funding a standby tourism marketing campaign to be implemented immediately following any incident/accident involving a radioactive waste shipment along the Caliente Rail alignment in the vicinity of U S 93, U S 6 or SR 318.

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**Subject:** Lacking Committed Mitigation

**Summary of Comment(s):** White Pine, Churchill, and Lander Counties expressed concern that the Rail Alignment EIS lacks committed mitigation.

**Response:** The proposed mitigation measures are specifically and/or generally addressed in Chapter 7, Table 7.1 and Table 7.2 where DOE has committed to mitigation of issues and has identified a range of reasonable best management practices and mitigation measures for impacts presented in the Rail Alignment EIS, and an on-going process committed to applying mitigation in accordance with CEQ regulations (40 CFR 1508.20) by avoiding, minimizing, rectifying, reducing, or compensating for impacts.

Proposed mitigation measures that are outside of the sole jurisdiction of the DOE, such as provision of funding, are discussed in Section 3.12 (4186) pages CRD3-264 to CRD3-267

**Comment(s):**

*[White Pine County]*

White Pine County encourages STB to require that mitigation for impacts to private and public land resources be designed, funded and implemented as soon after a decision to construct and operate the Caliente Rail Alignment is made. Implementation of mitigation during pre-construction phases of the project will be required for many types of impacts to ensure that consequences of construction are effectively avoided or minimized. This may require that mitigation be planned, funding secured, and implementation completed three-four years prior to the start of construction on the rail line and related facilities.

*[White Pine County]*

Likely impacts to public land grazing include loss of functionality for existing fencing, destruction of capital improvements, destruction or loss of functionality of water sources, stockwaters, and pipelines, loss or restriction of access to allotments, temporary and permanent loss of forage, fragmentation of allotments, loss or restriction of livestock movement and distribution within allotments, establishment of invasive species, establishment of noxious weeds, short-term deferment or loss of grazing rights due to construction, and long-term deferment or loss of grazing rights due to operations. DOE's application to STB discloses none of these impacts and no mitigation has been committed to by DOE to address said impacts. To ensure that impacts to public and private land use enjoyed by White Pine County businesses and residents are effectively mitigated, the following measures are provided to aid STB in seeking to mitigate impacts of the Caliente Rail Alignment. If the right-of-way is fenced it should be done in such a manner as to allow wildlife crossing while preventing a breach from livestock. Temporary fencing or other delineation of the immediate areas of authorized construction disturbance to avoid any larger than necessary land disturbance. A requirement to stockpile the topsoil from construction disturbed areas. In-road cattle guards and gates at existing fence crossings. Range and wildlife improvements, including corrals, chutes, guzzlers, pipelines, windmills, wells and other infrastructure that would be directly or indirectly impacted will need to be relocated. If the right-of-way is fenced it will be imperative to construct the fence to wildlife specifications. Crossings, including underpasses, will need to be constructed to maintain customary movement of livestock and wildlife. The DOE should be required to identify and implement all possible measures to minimize livestock and

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wildlife loss due to train collisions, including right-of-way fencing with proper maintenance, appropriate crossing structures, relocation of water sources within a mile of the track, and reduced train speeds DOE should be required to minimize land disturbance and water usage

***[White Pine County]***

The County requests that STB condition the DOE requested Certificate of Public Convenience and Necessity with a comprehensive suite of measures intended to avoid, minimize or otherwise mitigate (including compensation when appropriate) potential impacts of the Caliente Rail Alignment.

***[Churchill County]***

The EIS lacks specific committed mitigation throughout the document. DOE needs to provide specific mitigation measures for resources impacts DOE attempts to substitute Section 7.0 (Best Management Practices and Mitigation) as mitigation It is simply a restatement of the regulatory framework already applicable to DOE activities with respect to rail construction. This is a major construction project affecting both public and private lands in both corridors The STB must require specific and dedicated mitigation and monitoring measures as a condition of this project.

***[Lander County]***

The EIS lacks specific committed mitigation throughout the document. DOE needs to provide specific mitigation measures for resources impacts DOE attempts to substitute Section 7.0 (Best Management Practices and Mitigation) as mitigation. It is simply a restatement of the regulatory framework already applicable to DOE activities with respect to rail construction. This is a major construction project affecting both public and private lands in both corridors The STB must require specific and dedicated mitigation and monitoring measures as a condition of this project

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**Subject:** Mitigation Action Plan

**Summary of Comment(s):** Lincoln County and the N-4 State Grazing Board commented that DOE, the BLM, landowners, grazing permittees, appropriate state grazing boards, and Lincoln County must work cooperatively to develop a Land Use Mitigation Policy and Plan addressing areas of concern related to grazing allotment operations

**Response:** The proposed mitigation measure is generally addressed with the mitigation process described in Chapter 7, Section 7.3.3 page 7-9. That plan will address areas of concern listed in the comment below by Lincoln County and the N-4 State Grazing Board

**Comment(s):**

*[Lincoln County]*

1.18 Development and implementation of mitigation policy and action plan As set forth in greater detail in the accompanying 2007 Lincoln County Report, each allotment and grazing operation is operated differently. DOE, the BLM, landowners, grazing permittees, appropriate state grazing boards and Lincoln County must work cooperatively to develop a Land Use Mitigation Policy and Plan addressing areas of concern, including

- Direct and indirect land loss
- Displacement of capital improvements (wells, windmills, corrals, outbuildings, irrigation systems, etc.)
- Noxious weed control
- Fencing
- Livestock casualty
- Fire prevention and suppression
- Fire casualty
- Construction-related impacts
- Property takings
- Compensation
- Access
- Grazing Management Plans
- Water use and rights

*[N-4 State Grazing Board]*

Same as above

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**Subject:** Monitoring

**Summary of Comment(s):** Lincoln County requested funding for independent monitoring and oversight of DOE activities, quarterly reports on environmental mitigations, and cooperative re-mitigation of ineffective mitigations

**Response:** Retaining a third-party contractor to assist in the monitoring and enforcement of mitigation measures is specifically addressed in Table 7-2 [2] page 7-40

DOE disagrees that it should be required to provide funding specifically to Lincoln County to conduct additional independent monitoring and oversight of DOE activities. As stated in Table 7-2 [2] page 7-40, DOE is committed to retaining a third-party contractor, but it is not appropriate at this time to specify that Lincoln County should fulfill that role, or that the County should be provided funding to conduct oversight in addition to that provided by the third-party contractor. As described in Section 7.1, page 7-2 through 7-4, DOE will work with directly affected parties and the regulatory community, including Lincoln County, to develop and implement protocols for monitoring the implementation and effectiveness of mitigation measures and regulatory requirements.

DOE agrees to make copies of reports available to regulatory authorities and where appropriate, directly affected parties.

**Comment(s):**

*[Lincoln County]*

10.1 DOE should provide funding to Lincoln County to enable it to independently monitor the effectiveness of and, where applicable, enforce implementation by DOE of all requirements of county-issued permits and mitigation of impacts to private and local-government resources in the County.

*[Lincoln County]*

10.2 To ensure DOE's compliance with the environmental mitigation conditions required by any agency, DOE should submit quarterly reports to Lincoln County for the duration of the construction, operation, and decommissioning oversight period documenting the status of its mitigation implementation for each condition.

*[Lincoln County]*

10.3 Where monitoring demonstrates that implementation of mitigation measure has been ineffective, DOE should be required to work with Lincoln County to identify and implement alternative measures to mitigate the relevant impact.



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**Subject: Noise**

**Summary of Comment(s):** Lincoln County listed mitigation measures that DOE should be required to follow to reduce impacts of noise during construction and operation of the railroad

**Response:** The proposed mitigation measures are specifically addressed in Table 7-1 [35] through [37] page 7-27 and Table 7-2 [31] through [34] page 7-48 or generally addressed with the mitigation process described in Chapter 7.

Mitigation measures addressed in those sections include

- Regular inspection and maintenance of construction equipment
- Implementing construction activities with the goal of minimizing construction-related noise and vibration disturbances near any residential or other sensitive areas.
- Consulting with affected communities regarding the project construction schedule, including the hours during which construction takes place.
- Complying with Federal Railroad Administration regulations that establish decibel limits for train operations
- Consulting with affected communities

**Comment(s):**

*[Lincoln County]*

Measures to mitigate the impacts of constructing and operating the Caliente Rail Alignment within Lincoln County should require the following

9.1 Contractors must use proven techniques to reduce noise in the surrounding environment during construction

9.2 Time of day restrictions should be imposed on construction activity to avoid early morning, evening and nighttime

9.3 Time of day restrictions on truck and locomotive operations involving operation of the staging yard.

9.4 Other restrictions on truck operations, including idling and the use of engine brakes in certain zones to reduce noise impacts on local residents.

9.5 Strategic use of sound barriers to minimize the distance that noise will travel.

9.6 Consultation with Lincoln County and with other affected communities regarding DOE's project-related construction schedule, including the hours during which construction

9.7 Lubrication of track curves, where doing so would reduce noise for residential or other noise sensitive receptors

9.8 Prior to initiating project-related construction activities, DOE should develop a construction noise and vibration control plan to minimize construction noise and vibration along the rail line DOE should designate a qualified noise control officer/engineer to develop this plan (at least five years experience with major construction noise projects and board certification membership with the Institute  
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of Noise Control Engineering or registration as a Professional Engineer in Mechanical Engineering or Civil Engineering).

**9.9** Compliance with all applicable noise regulations, including FRA regulations establishing decibel limits for train operations (49 CFR Part 210)

**9.10** Consultation with Lincoln County and other interested communities to identify measures to eliminate the need to sound train horns consistent with FRA standards

**9.11** Regular inspection of rail car wheels to maintain wheels in good working order and minimize the development of wheel flats

**9.12** Mitigation of train wayside noise (locomotive engine and wheel/rail noise) for the noise-sensitive receptors along DOE's new rail line construction that fall within the 70 dBA Ldn noise contour for wayside noise, as specified below. With the written concurrence of the responsible local government(s), DOE should mitigate wayside noise with building sound insulating treatments, including insulated windows

**9.13** To minimize noise and vibration, DOE should install and properly maintain rail and rail beds according to the American Railway Engineering and Maintenance-of-Way Association (AREMA) standards, and shall regularly maintain locomotives, keeping mufflers in good working order to control noise.

The design goal for noise mitigation through the use of barriers should be a 10 dBA noise reduction, with a minimum noise reduction achieved of 5 dBA. Noise barrier performance should be determined in accordance with ANSI S12.8-1987, *American National Standard Methods for Determination of Insertion Loss of Outdoor Noise Barriers*. Sound insulation performance should be determined in accordance with ASTM 966-90, *Standard Guide for Field Measurements of Airborne Sound Insulation of Building Facades and Facade Elements*. Should noise mitigation be required at locations identified as containing structures that are potentially eligible for listing on the National Register of Historic Places, DOE must consult with the appropriate State Historic Preservation Officer and Lincoln County officials to assess effects and implement appropriate mitigation measures.

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**Subject:** Noxious Weeds

**Summary of Comment(s):** Lincoln County requested that the Board include a set of conditions in a Certificate for management and control of invasive plants. Those requested conditions include conducting site-specific surveys for weeds prior to construction, control of the spread of weeds through cleaning of vehicles, worker education, using weed-free sources of reclamation materials (e.g., seed mixes and hay) and fill materials, appropriate application of herbicides, and coordination with the BLM, Tri-County Weed Control District, private property owners, and ranchers during the development and implementation of weed control.

**Response:** The proposed mitigation measures are specifically addressed in Table 7-1 [28] page 7-23 and [30] page 7-24.

**Comment(s):**

*[Lincoln County]*

2.1 Prior to approval, a site-specific weed survey and a weed risk assessment, funded by DOE, must be completed by a BLM qualified contractor or the Tri-County Weed Control District. Monitoring should be conducted for a period no shorter than the life of the permit or until bond release and monitoring reports are provided to BLM. If the spread of noxious weeds is noted, appropriated weed-control procedures must be determined in consultation with BLM personnel, private property owners, permitted public land ranchers, and Tri-County Weed Control District personnel and would be in compliance with the appropriate BLM handbook sections and applicable laws and regulations. All weed-control efforts on BLM-administered lands must be in compliance with BLM Handbook H-9011, H-9011-1 Chemical Pest Control, H-9014 Use of Biological Control Agents of Pests on Public Lands, and H-9015 Integrated Pest Management.

*[Lincoln County]*

2.2 Prior to the entry of vehicles and equipment to a project area, areas of concern identified in the required site specific weed survey would be flagged in the field by a weed scientist or qualified biologist. The flagging would alert personnel or participants to avoid areas of concern. These sites would be recorded using GPS or other BLM Ely Field Office-approved equipment and provided to the Field Office Weed Coordinator or designated contact person.

*[Lincoln County]*

2.3 All contractors, operators, or permit holder must provide information and training regarding noxious-weed management and identification to all personnel working on public lands.

*[Lincoln County]*

2.4 To eliminate the transport of vehicle-borne weed seeds, roots, or rhizomes, all vehicles and heavy equipment must be free of soil and debris capable of transporting weed propagules. All such vehicles and equipment must be cleaned with power or high-pressure equipment prior to entering or leaving the work site or project area. Vehicles used for emergency fire suppression would be cleaned as a part of check-in and demobilization procedures. Cleaning efforts should concentrate on tracks, feet, and tires, and on the undercarriage. Special emphasis would be applied to axles, frames, cross-members, motor mounts, steps (on and underneath), running boards, and front and rear bumper/brush guard assemblies. Vehicle cabs should be swept out, and refuse disposed of in suitable waste receptacles. Cleaning sites

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would be recorded using GPS or other equipment and provided to the BLM Field Office weed coordinator or designated contact person

*[Lincoln County]*

2.5 To All interim and final seed mixes, hay, straw, hay/straw, or other organic products used for reclamation or stabilization activities, feed, or bedding must be certified free of plant species listed on the Nevada noxious weed list or specifically identified by the BLM Ely Field Office

*[Lincoln County]*

2.6 All source sites such as borrow pits, fill sources, or gravel pits used to supply inorganic materials used for construction, maintenance, or reclamation must be inspected prior to this site being put into active use and found to be free of plant species listed on the Nevada noxious weed list or specifically identified by the BLM Ely Field Office. Inspections should be conducted by a weed scientist or qualified biologist whose work would be funded by DOE and coordinated with private property owner, permitted public land rancher, and Tri-County Weed Control District personnel

*[Lincoln County]*

2.7 Mixing of herbicides and rinsing of herbicide containers and spray equipment would be conducted only in areas that are a safe distance from environmentally sensitive areas and points of entry to bodies of water (e.g., storm drains, irrigation ditches, streams, lakes, or wells)

*[Lincoln County]*

2.8 Methods used to accomplish weed and insect control objectives must consider seasonal distribution of large wildlife species.

*[Lincoln County]*

2.9 No noxious weeds would be allowed on the site at the time of reclamation release. Any noxious weeds that become established would be controlled with funding provided by DOE and completed by a BLM qualified contractor or the Tri-County Weed Control District. It is essential that all efforts be made throughout construction and operations to minimize the area disturbed. Efforts must be made to reseed with native species as soon as possible after the disturbed activities take place to assure revegetation with beneficial plants, or adaptive plant species that will establish a healthy and beneficial plant community in the disturbed area. Once again it is most desirable to require the removal of the top soil before construction activities begin, stock pile the desirable soil, and redistribute it following construction. This will help assure beneficial plants will be able to grow in this area.

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**Subject:** Private Lands

**Summary of Comment(s):** Lincoln County commented that DOE should avoid or compensate for impacts to property rights and select an alignment which, to the maximum extent practical, minimizes impacts to private property. Where private property must be crossed, DOE should be required to compensate land owners for loss of use or devaluation of private property crossed, divided or otherwise disturbed by, but not located within DOE easements and right-of-ways

Lincoln County stipulated that DOE avoid or minimize impacts to existing residential, commercial and industrial land uses due to construction vehicles, equipment, and workers. These impacts include crossing, blocking egress, and parking on private property as well as proper storage of equipment. DOE should work with affected businesses or industries to appropriately redress any damage to the businesses property caused by project-related construction or reconstruction activities

**Response:** The proposed mitigation measures are specifically addressed in Table 7-2 [6] & [7] page 7-41 or generally addressed with the mitigation process described in Chapter 7

**Comment(s):**

*[Lincoln County]*

3 4 Avoid or compensate for impacts to property rights. DOE should be required to select an alignment which, to the maximum extent practical, minimizes impacts to private property. Where private property must be crossed, DOE should be required to compensate land owners for loss of use or devaluation of private property crossed, divided or otherwise disturbed by, but not located within DOE easements and right-of-ways.

*[Lincoln County].*

3 5 Avoid/Minimize impacts to existing residential, commercial and industrial land uses. Construction vehicles, equipment, and workers should be prohibited from accessing work areas by crossing private property, parking on private property, or blocking ingress or egress to private property unless agreed to by the property owner. DOE should store its equipment and materials in established storage areas or on DOE's property to the extent practicable. The Community Liaison shall work with affected businesses or industries to appropriately redress any damage to the businesses property caused by DOE's project-related construction or reconstruction activities

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**Subject:** Radiological Monitoring and Safety

**Summary of Comment(s):** Lincoln County stated that DOE should be required to re-examine exposure management procedures and to revise same to reduce exposure to recognized safe levels. DOE should be required to minimize stop times in populated areas and designated safe stopping areas for rail transport should be isolated from communities, this relates to stopping places such as rail yards as well as in transit. Lincoln County stated that DOE should be required to design and implement a baseline epidemiological assessment and monitoring project in the County.

**Response:** DOE disagrees with these proposed mitigation measures because there are sufficient existing DOE policies and Federal regulations that govern worker exposure and the safe handling and transport of spent nuclear fuel and high-level radioactive waste. These issues were raised during the EIS comment and review process and addressed in the Rail Alignment EIS and associated CRD.

As stated in the CRD 2.7.8 (4071) page 2-54, DOE would comply with the requirements in 10 CFR Part 835, *Occupational Radiation Protection*, and DOE Order 440.1A, *Worker Protection Management for DOE, Federal and Contractor Employees, and Fire Protection*, which requires that the Department and its contractor employees have an effective worker protection program to reduce or prevent injuries, illnesses, and accidental losses by providing workers a safe and healthful workplace. A radiation protection program that meets the requirements of those regulations and policies would effectively protect workers and escorts at the Staging Yard. Therefore additional requirements for worker protection, and independent oversight by Lincoln County, are not necessary.

In regards to the suggestion by Lincoln County that DOE locate facilities away from populations, DOE has already selected the location of facilities required for the railroad after careful consideration of, among other things, the potential impacts to the health and safety of workers and the public. DOE will design those facilities, including the staging yard, to include fencing or other appropriate physical barriers to protect the public.

CRD 3.6.4 (1063) page 3-91 states, "U.S. Department of Transportation regulations (49 CFR 174.14), which DOE would follow, require that each shipment of hazardous material be forwarded within 48 hours of arriving at the Staging Yard." Thus, there is no need for specific limit on the number of casks in a staging yard.

As stated in CRD 3.6.2 (88) page 3-80, DOE would use industry codes and standards or requirements such as those of the Association of American Railroads, DOE has adopted Association Circular OT-55-F, *Recommended Railroad Operating Practices for Transportation of Hazardous Materials*, which limits the speed to 50 miles per hour. The Department has designed the rail line for a maximum design speed of 60 miles per hour for general freight.

DOE also disagrees with the requirement that DOE conduct a baseline epidemiological assessment, establish a protocol for compensation, and conduct an ecological risk assessment because the potential for radiological exposure to the public are very low and the proposed requirement far exceeds regulatory requirements. In Section 4.2.10.2.2 pages 4-338 to 350, DOE estimated that the collective radiation dose for members of the public from incident-free transportation along the rail line is estimated to be 0.087 to 0.21 person-rem. The probability of a latent cancer fatality based on the estimated dose would be  $5.2 \times 10^{-5}$  to  $1.3 \times 10^{-4}$ . The maximally exposed individual would be a

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resident who lives 18 meters (60 feet) from the rail line. This individual was assumed to be exposed to each of the 9,495 shipping casks that pass by on the rail line. The radiation dose for this individual is estimated to be 0.0078 rem. The probability of a latent cancer fatality for this individual based on the estimated dose and the assumptions would be  $4.7 \times 10^{-6}$ .

DOE also estimated the radiation doses and impacts for the public around the Staging Yard. The collective radiation dose is estimated to be 0.0064 person-rem. The probability of a latent cancer fatality based on the estimated dose would be  $3.9 \times 10^{-6}$ . The maximally exposed individual would be a resident who lives 400 meters (1,310 feet) from the Staging Yard. This individual was assumed to be exposed to each of the 9,495 shipping casks for a period of 2 hours per cask. The radiation dose for this individual is estimated to be 0.0027 rem over the entire shipping campaign. The probability of a latent cancer fatality for this individual based on the estimated dose and the assumptions would be  $1.6 \times 10^{-6}$ .

These estimates of potential radiation exposure are very low and do not warrant the level of study and monitoring requested by Lincoln County.

**Comment(s):**

*[Lincoln County]*

5.1 Minimization of occupational exposure. For transportation and related facility workers, DOE should be required to ensure that radiation dose badges are being used correctly and workers receiving higher than acceptable levels of radiation should be reassigned to work in areas with less risk of exposure. If workers are regularly exceeding dose limits, DOE should be required to reexamine exposure management procedures and to revise same to reduce exposure to recognized safe levels.

*[Lincoln County]*

5.2 Location of facilities away from population. In order to avoid risk of exposure for the residents of Lincoln County, any staging yard, if constructed, should be required to be sited at an appropriate distance from residential or public functions. DOE should be required to further isolate the staging yard facility with physical barriers. Special care should be taken that children cannot climb fences or otherwise put themselves into close proximity of the staging yard.

*[Lincoln County]*

5.3 Limit quantities/duration of nuclear waste stored at staging area. Limits should be placed on the number of casks allowed at the staging yard at any one time. Transportation protocols should be designed to ensure that the staging yard facility does not become a holding place in the event the repository is temporarily unable to accept additional casks, (i.e., departures of train shipments must be stopped at the place of origin, if the repository cannot accept casks.)

*[Lincoln County]*

5.4 Limit train stop times to reduce radiation exposure. The majority of the risk of radiological exposure to the population along the Caliente Rail alignment will be during train stoppage. As stop time increases so does the exposure to the population. This indicates that controls on the duration and location of stops are an important technique for reducing exposure to radiation. DOE should be required to minimize stop times in populated areas and designated safe stopping areas for rail transport should be isolated from communities.

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***[Lincoln County]***

**5 5 Encourage train operating speeds which reduce time in transit while maintaining rail safety**  
Increased speeds were also found to reduce exposure. For train shipments, DOE should be required to assess the trade-off between increased speeds to lower radiation exposure and the risk of an accident that increases with travel speed. The optimal operating speed should be determined and adhered to.

***[Lincoln County]***

**5 6 Provision to Lincoln County of independent oversight of federal radiation monitoring activities**  
Lincoln County officials should be granted independent or concurrent oversight over the Federal radiation monitoring at the staging yard and along rail corridors. DOE should provide funding for staff to perform independent monitoring and obtain and maintain necessary equipment.

***[Lincoln County]***

**5 7 Establish and monitor baseline epidemiological conditions**  
In consultation with Lincoln County, DOE should be required to design and implement a baseline epidemiological assessment and monitoring project in the County. Collection of baseline epidemiological data in the County should begin as soon after a DOE decision to construct the Caliente rail alignment or otherwise transport spent nuclear fuel and other high-level radioactive waste through Lincoln County is made. This would provide at least three years of pre-shipment baseline health conditions data for the County. Regardless of whether SNF/HLW is shipped through Lincoln County said baseline study and monitoring project should be implemented at least three years prior to initial receipt of radioactive waste at the Yucca Mountain site.

***[Lincoln County]***

**5 8 Establish protocol for radiation exposure related compensation**  
DOE should be required to negotiate advance agreements with Lincoln County regarding compensation that will automatically go into effect if background radiation levels exceed an agreed upon level. This "bright-line" approach assures residents of the County that they will be compensated for any latent cancer effects that may accrue to them and it reduces the likelihood of long drawn-out litigation between DOE and citizens in these communities. DOE should be required to bear the full cost of clean-up activities if radiation is detected in Lincoln County, using best available clean up techniques and equipment. DOE should be required to conduct an ecological risk assessment to determine the radiological risks to the wildlife and vegetation directly adjacent to the transportation corridors and the staging yard.



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**Subject:** Ranching

**Summary of Comment(s):** The N-4 Grazing Board requests the STB to place a condition on the DOE's Application on a broad range of measures to avoid, minimize, mitigate, and compensate, as appropriate, the potential impacts in the construction of the rail line. These measures entail road access, loss of Animal Unit Months (AUMs), development of mitigation plans, assurance of adequate funding, identification of direct, indirect, and unanticipated impacts, the identification, evaluation, implementation, and monitoring of mitigation measures; involvement of affected parties, and revision of Allotment Management Plans for the construction and operation periods of the rail line.

Lincoln County and the N-4 Grazing Board seek mitigation measures on a number of issues. livestock and wildlife crossings or underpasses, reimbursement for lost livestock, reimbursement for lost or deferred AUMs and capital costs, and replacement/provision of fence and waterline maintenance trail crossings

**Response:** The proposed mitigation measures are specifically addressed in Table 7-1 [5] page 7-15, [16] page 7-19, [21] & [23] page 7-21, [27] & [28] page 7-23, [31] page 7-24, and [32] page 7-25 and Table 7-2, [9], [10], & [11] page 7-42, [12], [13], [14], & [15] page 7-43, and [25] page 7-46 or are generally addressed with the mitigation process described in Chapter 7.

**Comment(s):**

*[N-4 State Grazing Board]*

The N-4 State Grazing Board requests the STB to condition the DOE requested CPC&N with a broad range of measures intended to avoid, minimize, mitigate, and compensate, when appropriate, the potential impacts of building this CRA. These measures should include

- Maintain all current Access to public land
- Achieve No Net Loss of animal unit months (AUMs) on affected public land grazing allotments
- Develop and implement mitigation plans before any land disturbance activity
- Assure Funding adequate to plan, implement, and monitor and make changes to mitigations
- Reduce unanticipated impacts by making sure all direct and indirect impacts have been fully identified
- Make sure the required mitigation measures address direct, indirect and unanticipated impacts
- Establish a system of collaboration to identify, evaluate, implement and monitor the mitigation measures, and plan a method to make appropriate changes in the mitigation measures as those changes become apparent during the construction, operation, and closure activities associated with CRA.
- Involve affected public land users, or their designated representatives, within the processes
- Prepare revised Allotment Management Plans (AMP) for the construction period, and additional revised AMP for operation of the CRA

*[Lincoln County]*

1.7 Livestock and wildlife crossings or underpasses The rail and associated access road(s) will severely impact movement of livestock, wildlife and wild horses. The likelihood of collision increases with the height of the cuts and fills, and the number of obstacles such as roads, fences, and sidings. Train speed is also a major factor associated with collisions. If the right-of-way is fenced it will be imperative to construct the fence to wildlife specifications. Crossings, most likely underpasses, will need to be constructed to maintain free, safe movement of livestock, wildlife, and wild horses. Without adequate

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crossings livestock could loose access to portions of the impacted allotments. This would have a significant impact on the allotment grazing system and could well result in the loss of AUMs. The specifications for the underpasses will need to be coordinated with allotment permittees and appropriate agency personnel. If the right-of-way is not fenced, at-grade crossings consisting of earthen ramps would be required in areas of cut and fill. If these mitigation actions are not taken there will be significant detrimental effects to livestock operators, wildlife and wild horses along the entire corridor.

*[N-4 State Grazing Board]*

Same as above.

*[Lincoln County]*

1.11 Reimbursement for lost livestock. The DOE should commit to implement all possible measures to minimize livestock loss due to train collisions, including right-of-way fencing with proper maintenance, appropriate crossing structures, and relocation of water sources within a mile of the track, and reduced train speeds. In any event, Nevada is an open-range state and any loss of livestock due to train operations must be reimbursed with a fair market price. See, e.g., NRS § 705.120.

*[N-4 State Grazing Board]*

Same as above.

*[Lincoln County]*

1.12 Reimbursement for lost or deferred Animal Unit Months (AUMs) and capital costs. Grazing on many allotments will be constrained or may be infeasible during construction of the rail line. Construction activities likely will have a significant impact on operations due to disturbance, limited access, and restricted or altered livestock movement and utilization patterns. Construction will result in a temporary loss of forage, which may result in a long-term loss of forage due to the nature of the climate and soils if not properly restored and maintained. The operational footprint will result in a long-term loss of forage, primarily in key grazing areas of gentle terrain and key forage species. Permittees will incur increased operational and capital costs to reshape their grazing operations around a new obstruction. Interim Grazing Management Plans will need to be developed for impacted allotments prior to construction, and new or revised Allotment Management Plans will be necessary once rail operations begin to enable the permittee to cope and keep operating with the modified and restricted circumstances. Mitigation will be essential in the form of opening new water sources to better distribute livestock to areas not disturbed by the construction activities. Additional feed will need to be developed, either on public land or the grazing operator's private land, in the form of vegetative manipulation and supplementation, to provide forage necessary to continue operations. Without some form of impact mitigation, many grazing operations will be simply infeasible.

*[N-4 State Grazing Board]*

Same as above.

*[Lincoln County]*

1.13 Replacement/Provision of fence and waterline maintenance trail crossings. Many allotments possess waterlines and fence lines with associated maintenance trails. These trails are critical to allotment operations. The rail line would cross many of these trails, and have a profound impact on operations, requiring mitigation, such as the provision of crossings. Replacement fencing either temporary or permanent will be required prior to removal or breach of any existing fencing.

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*[N-4 State Grazing Board]*  
Same as above.

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**Subject:** Range Improvements

**Summary of Comment(s):** Lincoln County and the N-4 Grazing Board seek mitigation measures on a number of issues relocation of existing infrastructure, protect existing waterlines, design and installation of alternative irrigation systems, and standards for repair/replacement of range improvements

**Response:** The proposed mitigation measures are specifically addressed in Table 7-1 [33] page 7-26 and Table 7-2 [10] & [11] page 7-42 and [12] page 7-43 or are generally addressed with the mitigation process described in Chapter 7

DOE agrees to coordinate with the permittees and the BLM on specific mitigation measures to maintain the state of range improvements for each allotment before, during and after construction

**Comment(s):**

*[Lincoln County]*

1.6 Relocation of Existing Infrastructure. Corrals, chutes and other infrastructure that would be directly within the construction or operations corridor would have to be relocated, or else they would be completely lost

*[N-4 State Grazing Board]*

Same as above

*[Lincoln County]*

1.10 Protect existing waterlines The proposed rail line would cross many existing waterlines used for grazing operations, many of which are used to convey water to which the permittee holds water rights or that serves as base property for the allotment (see Figure 4.4 in the accompanying Lincoln County sponsored report entitled Proposed DOE Caliente Rail Corridor, Lincoln County, Nevada An Analysis of Impacts & Alternatives, With Recommended Mitigation, November 30, 2007 available at <http://www.lcnop.com/transportation.html>). These lines must be maintained during construction and operations of the rail line Permittees must be allowed to perform routine maintenance on these pipelines over the life of the rail As discussed above and in more depth in the accompanying 2007 Lincoln County Report, if these pipelines were severed, grazing operations would be significantly impacted and possibly rendered useless.

*[N-4 State Grazing Board].*

Same as above.

*[Lincoln County]*

1.14 Design and Installation of alternative irrigation systems The balance of currently irrigated fields crossed by the Caliente Rail Alignment may require design and installation of alternative irrigation systems to enable continued effective irrigation of the balance of agricultural fields crossed by the rail line Because Nevada water law requires that water permitted for irrigation use by the Nevada State Engineer be used or the water right is subject to forfeiture, it is imperative that the balance of currently irrigated lands within partially impacted parcels be made irrigable In the event that the subject fields can no longer be feasibly irrigated, property rights would be lost DOE must compensate the owner for

Mitigation Comments – Range Improvements

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loss of use of the entire parcel as well as the loss of uses of related water

*[N-4 State Grazing Board]*

Same as above

*[Lincoln County]*

1 19 Standard for repair/replacement of range improvements. Any damage to existing range improvements caused by construction activities must be repaired using material that meets or exceeds the quality of the existing improvement. If damage occurs, the BLM, livestock operator and Lincoln County must be notified immediately. If damage occurs during active livestock grazing, repairs should be made within 24 hours. In addition, where required, tortoise fencing would be approximately 18 to 24 inches high, consisting of welded mesh attached to small stakes so cattle should be able to move over it.

*[N-4 State Grazing Board]*

Same as above

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**Subject:** Recreation

**Summary of Comment(s):** Lincoln County and the N-4 Grazing Board stipulated that DOE should minimize indirect Off Highway Vehicle (OHV) use to avoid impacts in the project area from construction of the rail and associated access roads. DOE should also provide funds for additional personnel to monitor improper OHV use and funds for appropriate mitigation measures and monitoring to alleviate the identified adverse and indirect OHV impacts to the project area

**Response:** As stated in CRD 3 7.1 (1200) page CRD3-104, DOE agrees to coordinate with representatives from the BLM and county law enforcement agencies to develop strategies that would help protect public and private lands from potential increased illegal or destructive public access. The Department would monitor conditions and appropriate mitigations could be addressed as part of the mitigation process described in Chapter 7. However, DOE disagrees that it should be required at this time to fund additional rangers to monitor OHV use because it is the responsibility of the Bureau of Land Management to determine the need for, and mechanisms to fund, personnel to monitor OHV use on lands managed by that agency

**Comment(s):**

*[Lincoln County]*

1.21 Minimize indirect Off Highway Vehicle (OHV) use impacts in the project area. The construction of the rail alignment and associated access roads will facilitate and encourage OHV use, whose use can be destructive to vegetation. DOE must fund the provision of additional rangers to monitor improper OHV use in the rail project area. DOE should be required to fund appropriate mitigation measures and monitoring to alleviate the identified adverse and indirect OHV impacts to the project area

*[N-4 State Grazing Board]*

Same as above

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**Subject:** Revegetation

**Summary of Comment(s):** Lincoln County and the N-4 State Grazing Board requested that the Surface Transportation Board include a set of conditions in a Certificate for stockpiling of topsoil for revegetation purposes

**Response:** The proposed mitigation measures are specifically addressed in Table 7-1 [31] page 7-24 and [32] page 7-25 or are generally addressed with the mitigation process described in Chapter 7.

**Comment(s):**

*[Lincoln County]*

1.4 Stockpiling and Application of Topsoil for Revegetation Purposes Another essential mitigation would be the requirement to stockpile the topsoil from construction disturbed areas. Once construction is completed, the topsoil could then be redistributed as near as possible to original location and reseeded with native and adaptive plant seeds should occur to minimize the lost forage and maintain erosion controls.

*[N-4 State Grazing Board]*

Same as above

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Mitigation Comments & Responses

**Subject:** Socioeconomic

**Summary of Comment(s):** Lincoln County requests DOE provide jobs, funding for community facilities and programs, special job training and hiring consideration, bus or jitney service, funding for elections, funding for training and time for elected and appointed officials, and funding for the county to conduct independent oversight and monitoring of DOE activities

**Response:** The mitigation measures proposed by Lincoln County that would not violate laws, regulations, or Department policy could be addressed as part of the mitigation process described in Chapter 7. However, DOE disagrees with some of the proposed mitigation measures because DOE must comply with federal laws and regulations regarding hiring, procurement, and funding. This would preclude the Department from committing to some of the mitigation measures proposed by Lincoln County.

See CRD 3 12 (4186) pages CRD3-264 through CRD3-267 which addresses proposed mitigation measures that are outside the authority of the DOE

**Comment(s):**

*[Lincoln County]*

7 1.1 DOE should provide Lincoln County with funds to (1) hire experts and conduct independent oversight during the characterization, construction, and emplacement and closure phases of the rail line, (2) enable the County to monitor the impacts of the Caliente Rail Alignment on key socioeconomic indicators in Lincoln County, such as population, jobs, and income, and (3) enhance the quality of community life through investments in community centers, public parks, public pools, or other facilities that are valued by the community.

*[Lincoln County]*

7 1.2 DOE should be required to provide funding for community programs which enhance community cohesion in Lincoln County.

*[Lincoln County]*

7.2 1 DOE should be required to compensate the County for costs associated with Caliente Rail alignment related special elections and increased time that elected officials and local government employees may need to put towards related issues.

*[Lincoln County]*

7.2.2 DOE should be required to assist Lincoln County elected and appointed officials in obtaining training designed to effectively avoid or manage Caliente Rail Alignment related political divisiveness

*[Lincoln County]*

7 5 1 DOE should provide Lincoln County with funding to develop and implement a Caliente Rail Alignment related population impact monitoring program



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The following socioeconomic mitigation measures from Lincoln County were specifically responded to in the Rail Alignment EIS CRD 3.12 Impact Mitigation and Compensation, 3 12 (4186), pages CRD3-264 through CRD3-267.

**Comment(s):**

*[Lincoln County]*

The following measures would help ensure that employment opportunities and benefits are maximized in Lincoln County: A DOE funded local job training program will enhance employment opportunities for residents of Lincoln County. The type of skills required for repository work as compared to the capabilities possessed by County workers will affect the chances of local workers being used and in what capacity. These skills include management, engineering, craft, equipment operators, etc.

*[Lincoln County]*

7 3 1 DOE should be required to facilitate location of ancillary activities in the County. At peak employment, DOE anticipates requiring several hundred clerical/office workers to support site development/operations at Yucca Mountain and most of these are anticipated to be located in the Las Vegas area. Through the use of currently available data transmission technologies (i.e. modems, internet access, etc), certain "back office" functions could be conducted at locations in Lincoln County.

*[Lincoln County].*

7 3 2 There is an issue of whether the jobs available will be union or non-union positions. Because union hiring halls are typically located in metropolitan centers, rural workers often find it difficult to obtain union jobs. Consequently, if union labor is relied upon for Yucca Mountain work, employment opportunities for Lincoln County residents may be limited. DOE should be required to implement a hiring policy that gives Lincoln County residents a fair opportunity to apply for the available positions. Agreements between DOE and unions should require within Lincoln County community based training programs.

*[Lincoln County]*

7 3 3 The HUBZone Empowerment Contracting program was enacted into law as part of the Small Business Reauthorization Act of 1997, and is implemented by the U.S. Small Business Administration ("SBA"). The program encourages economic development in historically underutilized business zones ("HUBZones"). The SBA designated Lincoln County as a HubZone area. DOE should commit to identifying appropriate and significant procurements to be set-aside for SBA HubZone businesses, particularly those located in Lincoln County.

*[Lincoln County]*

7 3 4 Due to the long distance between communities in Lincoln County and the repository and the cost of gasoline, DOE should provide bus or jitney service to bring Lincoln County residents to various rail construction sites and ultimately, to the repository for work. A bus or jitney service would also serve to reduce vehicle miles traveled and mitigate any traffic or air quality impacts.

*[Lincoln County]*

7.4.1 DOE should be required to implement a procurement policy that would increase purchases of goods and services from within Lincoln County that would benefit businesses and their employees in the City of Caliente and in other areas of Lincoln County.

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**Subject:** Surface and Groundwater

**Summary of Comment(s):** Lincoln County has requested that the Surface Transportation Board include a set of conditions in a Certificate for avoiding or compensating impacts to privately held water resources. The Commissioners also request that DOE be required to provide funds to Lincoln County communities to upgrade and improve their water systems, and to consider leasing unused water rights from existing willing right-holders.

**Response:** The proposed mitigation measures are specifically addressed in Table 7-1 [23] page 7-21 and Table 7-2 [36] page 7-49 or are generally addressed with the mitigation process described in Chapter 7.

DOE is committed to working with local communities and counties to determine whether mutually beneficial actions or improvements, such as water system improvements, would be appropriate if additional services provided by those communities, such as an extension of their water system, are required as a result of constructing or operating the railroad

**Comment(s):**

*[Lincoln County]*

3.6 Avoid or compensate impacts to privately held water resources. If it is determined that withdrawing groundwater for construction and dust control will have a detrimental effect on any existing water right in Lincoln County, DOE should be required to avoid this impact by trucking in the water from another more abundant source. DOE should be required to provide funds to the impacted communities in Lincoln County to upgrade and improve their water systems including wells, pumping, and storage capabilities to off-set the additional demands that will be made by new permanent and temporary residents, servicing the staging yard and related facilities and construction camps, and servicing additional through traffic. DOE should be required to consider leasing unused water rights from existing willing right-holders rather than seeking new water permits and the construction and pumping of new wells which may adversely impact existing water rights

*[N-4 State Grazing Board]*

Same as above

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**Subject:** Timing

**Summary of Comment(s):** Lincoln County expresses the concern that mitigation design, funding, and implementation occur in a timely manner

**Response:** The proposed mitigation measures could be addressed as part of the mitigation process described in Chapter 7. DOE acknowledges that this process would begin prior to the start of construction.

As stated in DOE's Application page 36, the Nuclear Waste Fund will be used to fund the construction of the rail line, subject to yearly Congressional appropriations.

**Comment(s):**

*[Lincoln County]*

Lincoln County is concerned that mitigation for impacts to private and public land resources be designed, funded and implemented as soon after a decision to construct and operate the Caliente Rail Alignment is made. For many types of impacts, implementation of mitigation during pre-construction phases of the project will be required to ensure that consequences of construction are effectively avoided or minimized. This may require that mitigation be planned, funding secured, and implementation completed three-four years prior to the start of construction on the rail line and related facilities. Recognition of the spatial aspects of impact and the temporal dimensions of mitigation success will be key to keeping the residents of Lincoln County whole.

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**Subject:** Transportation

**Summary of Comment(s):** DOE should be required to assist Lincoln County in developing and implementing a traffic monitoring and mitigation plan. Road use, safety and maintenance should be coordinated with local governments

**Response:** The proposed mitigation measures could be addressed as part of the mitigation process described in Chapter 7

DOE does not believe that a separate monitoring and mitigation plan is necessary as the process described in Chapter 7 will be substantive to mitigate most traffic impacts. DOE would conduct rail operations in a manner that minimized the interruption of traffic in the Caliente business district. Chapter 7 of the Rail Alignment EIS describes the process DOE would use to coordinate with permittees before construction activities and mitigate impacts that could result from construction. Any decision related to mitigation measures for an individual directly affected party would be handled during on-going development of the Mitigation Action Plan.

Section 2.2.2 describes access roads to construction camps and Section 2.2.2.4.2 describes access roads to ballast quarries. The potential impacts associated with these access roads are discussed throughout Chapter 4 of the EIS. To minimize the impacts of temporary access roads, the Department identified access roads that would utilize the existing road network where possible and, where that was not possible, roads that covered the least distance to facilities from existing paved roads. Improvements to these existing roads would benefit public users. DOE would base improvements to existing roads on the Bureau of Land Management Road Standards (Excerpts from BLM Manual Section 9113 - Roads). Table 7-1 [9] page 7-16 addresses the control of fugitive dust emissions on unpaved roads per applicable permits. Table 7-2 [8] page 7-41 describes the Department's commitment to compensate affected counties for the maintenance on existing roads that are directly impacted.

**Comment(s):**

*[Lincoln County]*

7.6.1 DOE should be required to assist Lincoln County in developing and implementing a traffic monitoring and mitigation plan.

*[Lincoln County]*

7.6.2 DOE should be required to identify county roads to be used during construction of the railroad. These roads should be improved for safety and dust suppression prior to the start of significant engineering of the rail alignment and the beginning of any construction activities.

*[Lincoln County]*

7.6.3 DOE should be required to enter into cooperative agreements with local Lincoln County officials and road department management for adequate safety and road maintenance activities.

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**Subject:** Water Sources

**Summary of Comment(s):** Lincoln County and the N-4 Grazing Board have requested that the Surface Transportation Board include a set of conditions in a Certificate for avoiding or compensating impacts to privately held water resources. They also request that DOE be required to provide funds to communities to upgrade and improve their water systems, and to consider leasing unused water rights from existing willing right-holders.

**Response:** The proposed measures to mitigate impacts to water sources and to provide alternative water sources or relocate existing wells if DOE actions prevent access to wells, springs, or other surface or groundwater sources is specifically addressed Table 7-1 [21] page 7-21 and Table 7-2 [12] & [14] page 7-43 and [25] page 7-46. The methods for identifying water sources that may be affected, and for working with grazing permittees and agency personnel, is addressed as part of the mitigation process described in Chapter 7.

DOE disagrees with the proposed mitigation to relocate all water sources within one mile of the construction right-of-way because some of those water sources will not be impacted. As described in Chapter 7, DOE is committed to working with directly affected parties and regulatory agencies to identify where livestock herds and wildlife populations may be affected, and to working with the affected parties to move the potentially affected sources of water or otherwise mitigate the impacts.

**Comment(s):**

*[Lincoln County]*

1.9 Relocation of all water sources, stockwaters and wildlife guzzlers within one mile of the construction right-of-way. Livestock, wildlife and wild horses congregate around water sources given the dry, hot nature of the environment. Any water sources, including stockwaters and guzzlers within a mile of the rail will result in a higher probability of train collisions with livestock, wildlife and wild horses. Appropriate rail crossings will also be needed near water sources. DOE should coordinate with grazing permittees and appropriate agency personnel to discuss the relocation of any water sources within a mile of the proposed rail, and the need for rail crossings in these areas. Without mitigation there will be significant impacts to livestock, wildlife and wild horses due to a loss of, or danger associated with water accessibility.

*[N-4 State Grazing Board]*

Same as above.

Finance Docket No. 35106

**APPENDIX C**

United States Nuclear Regulatory Commission  
Policy Issue Information Memorandum  
SECY-07-0095

# **POLICY ISSUE INFORMATION**

June 6, 2007

SECY-07-0095

**FOR** The Commissioners

**FROM** Luis A. Reyes  
Executive Director for Operations

**SUBJECT** STAFF ACTIONS TAKEN IN RESPONSE TO THE NATIONAL  
ACADEMY OF SCIENCES' STUDY ON TRANSPORTATION OF HIGH-  
LEVEL WASTE AND SPENT NUCLEAR FUEL IN THE UNITED STATES

## **PURPOSE**

To inform the Commission of actions taken by staff in response to recommendations in the National Academy of Sciences' (NAS) study on the transportation of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) in the United States

## **SUMMARY**

There are three recommendations in the NAS transportation safety study that concern safety and security-related aspects of transportation package design. Staff believes that it has adequately addressed the recommendations on the use of full-scale package testing, and the need for additional studies and operating controls on shipments related to very long-duration, fully engulfing fires. Staff continues to work with stakeholders to communicate information on the security-related aspects of transportation package design, consistent with the Commission's policy and guidance.

## **BACKGROUND**

In February 2006, the NAS published the results of a 3½-year study, titled *Going the Distance*, that examined the safety of transporting SNF and HLW in the United States. NAS initiated this study to address what it perceived to be a national need for an independent, objective, and

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authoritative analysis of SNF and HLW transport in the United States. The study was co-sponsored by the U S Nuclear Regulatory Commission (NRC), the U S Department of Energy (DOE), the U S Department of Transportation (DOT), the Electric Power Research Institute and the National Cooperative Highway Research Program.

The NAS study made several findings that dealt with the safety of spent fuel package-design standards, societal concerns with future shipping campaigns, and security. The principal findings on transportation safety and security were:

- The study could identify no fundamental technical barriers to the safe transport of SNF and HLW in the United States. Transport by highway (for small-quantity shipments), and by rail (for large-quantity shipments) is, from a technical viewpoint, a low-radiological-risk activity, with manageable safety, health, and environmental consequences, when conducted with strict adherence to existing regulations. However, there are a number of social and institutional challenges to the successful initial implementation of large-quantity shipping programs that will require resolution. The challenges of sustained implementation should not be underestimated.
- Malevolent acts against SNF and HLW shipments are a major technical and societal concern, especially since the September 11, 2001, terrorist attacks on United States. The NAS committee judges that some of its recommendations for improving transportation safety might also enhance transportation security. NRC is undertaking a series of security studies, but the NAS committee was unable to perform an in-depth technical examination of transportation security because of information constraints.

The study also made a number of specific recommendations for enhancing the safety of transportation package designs, and for addressing societal concerns (primarily focused on a potential large-scale shipping campaign, such as to Yucca Mountain), including perceived risk and security. NRC staff has participated in several meetings with DOE and DOT, two of the study's co-sponsors, to discuss actions being undertaken by each agency to address the study's recommendations. In general, DOE, as a potential shipper, is addressing recommendations related to shipping logistics (including physical protection measures during shipments), and societal and institutional concerns, DOT is addressing those concerned with carrier safety, and NRC (as discussed below) is addressing recommendations dealing primarily with the safety- and security-related aspects of transportation package design. This is consistent with NRC's primary safety role, in potential Yucca Mountain shipments, of certifying the transportation casks, pursuant to the Nuclear Waste Policy Act.

## DISCUSSION

There are three recommendations, in the study, that concern safety and security-related aspects of transportation package design. These involve the use of full-scale package testing, the response of transportation packages in long-duration fires, and an independent examination of the security of SNF transportation before beginning a large-scale shipping campaign to a Federal repository or interim storage.



### Use of Full-Scale Package Testing

The study endorsed the use of full-scale testing as one of a number of analytical tools that could be used to determine how transportation packages would perform under both regulatory and credible extra-regulatory conditions. The study recommended that, "full-scale package testing ***should continue*** to be used as part of integrated analytical, computer simulation, scale model, and testing programs to validate package performance. Deliberate full-scale testing of packages to destruction should not be required as part of this integrated analysis or for compliance demonstrations." (Emphasis Added) In addition, NAS has stated, in public meetings, that the study did not endorse full-scale testing as a prerequisite for approving individual package designs.

Staff believes that the recommendation supports NRC's current practice of using a combination of analytical techniques, such as computer simulation, full or partial scale-model testing, and component testing for package approvals. The study's recommendation is consistent with NRC's current plans in the Package Performance Study (PPS) to perform a demonstration test involving a realistic rail impact and fire. The NAS study also supports NRC's decision not to test a full-scale transportation package to destruction in the PPS. As stated in the NAS study, "Deliberate full-scale testing of packages to destruction through the application of forces that substantially exceed credible accident conditions would be marginally informative and is not justified given the considerable cost for package acquisitions that such testing would require."

The staff has signed a cooperative agreement with the German Federal Institute for Materials Research and Testing (BAM) to obtain the full-scale and quarter scale transportation cask package drop test data for two casks. The staff is in the process of performing detailed independent structural simulations and finite element analyses of the drop scenarios and compare the results with the BAM drop test data. This will help establish the magnitude of uncertainty in finite element analysis, and may address the use of scaling methods in the structural analysis of spent nuclear fuel casks.

Staff has incorporated the study's findings and recommendations, in its public outreach efforts, to help explain the Commission's decision for not undertaking full-scale testing in the PPS, and to support the Commission's decision on the selection of credible accident scenarios. The study's discussions and finding that full-scale testing is only one of many useful technical tools for analyzing package performance has been useful in explaining the technical adequacy of NRC's process for reviewing and, as appropriate, certifying shipping packages for SNF and HLW.

### Transportation Package Performance in Very Long-Duration, Fully Engulfing Fires

The study concluded that current package performance standards in 10 CFR Part 71 are adequate to ensure package containment effectiveness over a wide range of transportation accidents, including most credible accident conditions. The study did question whether current package performance standards bound accidents involving very long-duration, fully engulfing fires. It recommended that NRC undertake additional analyses of very long-duration fire scenarios that would bound expected real-world accident conditions for representative package designs that are likely to be used in large shipping campaigns. The objective of these analyses would be to examine the need for regulatory or operational changes that could help prevent accidents that could lead to such a fire or to mitigate their consequences.

Since the study was published, the NRC staff has completed a number of actions that address this recommendation. First, staff has reviewed railroad accident data, from the Federal Railway Administration (FRA) database, covering a period of 30 years (1975-2005), to determine the frequency and severity of rail fires. Based on FRA data and accident reports compiled by the National Transportation Safety Board (NTSB), staff has concluded that the likelihood of a long-term fully engulfing rail fire is extremely low. In the nearly 21 billion miles of rail travel between 1975 and 2005, there have been eight accidents that staff believes could have the potential for a fully engulfing very long-duration fire. Of these eight accidents, seven involved the derailment of a single train and one occurred in a tunnel.

Based on the NTSB accident reports on the seven accidents that did not occur in a tunnel, staff believes that none of them would have actually resulted in a fully engulfing fire for a spent fuel package. This is based on mitigating factors present in all seven accidents. The mitigating factors include the expected location of a spent fuel package in the fire, the flammable material released, and emergency response. In each of the seven accidents, a spent fuel package would not have been positioned close enough to the burning flammable material to be fully engulfed. This is because of the DOT requirement for buffer cars, and is supported by accident diagrams of rail-car configurations taken from NTSB reports. In addition, many of the accidents involved flammable gases, such as propane, that resulted in localized pressure fires, and did not involve the pooling and migration of flammable liquids. These gaseous fires were intentionally allowed to burn for long periods (in some cases, for several days), as a safety measure, to empty ruptured tank cars and reduce the chance of explosion. Finally, emergency response times were fairly rapid in these seven accidents (most were responded to within 1 to 2 hours) and response efforts included cooling the tank cars, effectively minimizing fire intensity and duration. However, none of these mitigating factors was present in the Baltimore Tunnel fire accident - the one accident that occurred in a tunnel.

Second, staff has completed two studies on the performance of representative spent fuel casks in severe rail and highway tunnel fires. "Spent Fuel Transportation Package Response to the Baltimore Tunnel Fire Scenario," NUREG/CR-6886 (published December 2006), and "Spent Fuel Transportation Package Response to the Caldecott Tunnel Fire Scenario," NUREG/CR-6894 (published February 2007). The Baltimore Tunnel fire study analyzed the potential response of the HI-STAR 100, TN-68, and the NAC-LWT shipping-package designs in a severe rail-tunnel-fire environment, based on an accident that occurred in Baltimore, Maryland, in 2001. The HI-STAR 100 and TN-68 are NRC-certified rail casks, and the NAC-LWT is an NRC-certified truck cask, that has been shipped by rail. The Caldecott Tunnel fire study analyzed the potential response of the NAC-LWT truck cask, based on a severe highway tunnel fire that occurred in California in 1982. The studies indicated that the casks would not be expected to release any fission products from the spent fuel. Staff intends to send copies of the two studies to the NAS for distribution to the NAS study committee members. These studies are important because they address a severe type of fire (i.e., tunnel fire) that is potentially very long-duration and for which it may be difficult to take mitigating actions.

Third, staff has considered what operating controls could be implemented, for rail shipments, to prevent or mitigate the consequences of long-duration fires. One important operating control would be to prohibit a train carrying flammable gases or liquids from being in a tunnel at the same time as a train carrying spent fuel. In March 2006, NRC staff requested that the Association of American Railroads (AAR) consider revising AAR Circular No. OT-55, *Recommended Railroad Operating Practices For Transportation of Hazardous Materials*. As a

result, the AAR issued *AAR Circular No OT-55, Revision I*, in July 2006. It states that, "when a train carrying SNF or HLRW meets another train carrying loaded tank cars of flammable gas, flammable liquids or combustible liquids in a single bore double track tunnel, one train shall stop outside the tunnel until the other train is completely through the tunnel." NRC is also following FRA's ongoing deliberations on requiring the use of dedicated trains for spent fuel shipments. It should be noted that DOE has already announced a policy for using dedicated trains as its preferred mode of transport. Staff believes that the prohibitions on the use of tunnels in OT-55, coupled with either an FRA requirement or DOE policy on using dedicated trains, will virtually eliminate the chances of rail accidents resulting in long-duration, fully engulfing fires, and that NRC does not need to take any further actions on rail operating practices.

#### Independent Assessment of Transportation Security

The study also recommended that, "an independent examination of the security of spent fuel and high-level waste transportation, should be carried out prior to the commencement of large-quantity shipments to a federal repository or to interim storage." This recommendation was not based on an identified deficiency in current security practices, but on an inability to access security information. The NAS committee was formed prior to September 11, 2001, and a majority of its members did not have the security clearances required to access important security-related information, particularly the security assessments being done on spent fuel transportation packages by the NRC and Sandia National Laboratories. It should also be noted that a recently completed assessment by the American Physical Society, *Consolidated Interim Storage of Commercial Spent Fuel*, (February 2007), endorsed the NAS recommendation for an independent examination of the security of spent fuel shipments.

Staff concludes that current security measures and standards put in place since September 11, 2001, are adequate for the protection of spent fuel and high level waste transportation even in the event of increased shipping campaigns. Physical protection measures for future shipments must match the threat in place at the time of shipment, and shipment tracking and monitoring technologies are constantly evolving. Shipments to Yucca Mountain would not begin, at the earliest, until 2017, based on current DOE estimates. In addition, whereas NRC would be responsible for overseeing the security requirements for commercial shipments to an interim storage facility, DOE would be responsible for implementing and overseeing the security requirements for Yucca Mountain shipments. Thus, a comprehensive independent security assessment that includes both shipments to Yucca Mountain and an interim storage facility would require substantial financial commitment and participation of both NRC and DOE.

Staff is considering the merits of releasing non-sensitive summaries of current spent fuel package security assessments in partial response to the NAS study recommendation. Spent fuel package designs, recently assessed in the Commission's spent fuel package security assessments, could be used at Yucca Mountain or interim storage facilities. The NRC's spent fuel package assessments adequately demonstrate that the stringent safety standards applied to the design of spent fuel packages provide substantial protection from reasonable threat scenarios. One of the key stakeholder groups, the Council of State Governments Midwestern Radioactive Materials Transportation Committee, has recently endorsed the NAS recommendation for an independent examination of the security of spent fuel shipments, and has specifically requested that NRC share some of the results of its spent fuel package security assessments with the States (see Enclosure, Letter from Chairman Klein to Robert Owen). In

response, staff has begun a dialogue, with representatives of the State Regional Transportation Groups (SRG's), aimed at eventually sharing information from the NRC spent fuel package security assessments with State and local governments, to help them carry out their emergency response and law enforcement responsibilities more effectively. As part of the dialogue, the SRGs are compiling a list of what information (related to the spent fuel package security assessments) is needed, how and by whom such information would be used, and how shared information would be protected. Staff expects this process to be completed by the SRGs later this year. The staff will devise a plan to share the requested information with the States, consistent with the Commission's policy and guidance. The SRGs have also informally expressed an interest in participating in, or conducting an independent examination or peer review of, NRC's spent fuel package security assessments. However, it is premature to decide to perform an independent assessment which will be used to evaluate current standards and the applicability of these standards on a shipping campaign more than ten years in the future.

#### Information Sharing

In addition, the study also recommends that DOE, NRC, DOT and the Department of Homeland Security (DHS) should promptly complete the job of developing reasonable criteria for protecting sensitive information about spent fuel and HLW transportation, and commit to the open sharing of information not requiring protection.

NRC has worked jointly with DOE, DHS, and DOT to develop CG-RWT-1, the Joint DOE/NRC/DOT/DHS Classification and Sensitive Unclassified Information Guide for the Transportation of Radioactive Waste to Yucca Mountain. The classification guide was developed to identify the classified and sensitive unclassified aspects for the transport of spent nuclear fuel and high-level radioactive waste to Yucca Mountain. The guide, which will be published by DOE, is currently awaiting concurrence from DOT (NRC has already concurred).

The NRC has also developed guidance for the open sharing of non-sensitive information in its *Supplement to the Communication Plan for Security Assessments of Materials and Research & Test Reactors*, dated March 29, 2007 (ML070890305).

#### COORDINATION

The Office of the General Counsel has reviewed this paper, and has no legal objection.

/RA/

Luis A. Reyes  
Executive Director  
for Operations

Enclosure  
Letter from Chairman Klein to Robert  
Owen, dated August 16, 2006

**August 16, 2006**

**Mr Robert Owen, Chair  
CSG Midwestern Radioactive Materials  
Transportation Committee  
701 East 22nd Street, Suite 110  
Lombard, Illinois 60148**

**Dear Mr Owen**

**On behalf of the U S Nuclear Regulatory Commission (NRC), I am responding to your letter dated May 31, 2006, concerning your request that the NRC develop appropriate versions of its package security assessments and share this information with the State organizations involved in ensuring the safety and security of shipments. The Commission understands the importance of this information in enabling State and local governments to plan for the safety and security of spent fuel shipments, especially in their emergency response roles and responsibilities, and intends to ensure that they have the information they need to exercise these roles and responsibilities.**

**The NRC considers the assessments of spent fuel shipping package performance to be security-related information. Accordingly, the NRC, in providing security-related information to the States, needs to reach a proper balance between sharing and protecting security information. The Commission understands that the State regional groups are receptive to initiating a dialogue with the NRC on obtaining this information. The agency's point of contact for this effort is Mr Earl P Easton, NRC's Senior Level Advisor for Transportation. He will be contacting you and the three other State regional groups shortly to initiate discussions to determine what information would be relevant and appropriate to be shared and what controls would be applied to protect the transfer and possession of such information. The objective of establishing these controls is to ensure that personnel access is limited to those with a need to know the information and to prevent the loss or theft of the information.**

**I want to assure you that the Commission values the work of your Committee and desires to strengthen NRC's partnership with the States in order to ensure the safe and secure transport of all radioactive material.**

**Sincerely,**

**/RA/**

**Dale E Klein**

**cc See attached list**

cc

**Elgan Usrey, Chairman  
Manager, Preparedness & Mitigation Division  
Tennessee Emergency Management Agency  
3041 Sidco Drive  
Nashville, Tennessee 37204**

**Barbara Byron, Co-Chairman  
Nuclear Waste Policy Advisor  
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**Joe Strolin, Co-Chairman  
Administrator, Planning Division  
Office of the Governor  
Nevada Agency for Nuclear Projects  
1761 E College Parkway, Suite 118  
Carson City, Nevada 89706**

**Edward L Wilds, Jr , Chairman  
Director, Division of Radiation  
Department of Environmental Protection  
79 Elm Street  
Hartford, Connecticut 06106**

**Finance Docket No 35106**

**APPENDIX D**

**August 11, 2008 Letter from the  
United States Environmental Protection Agency to  
Dr. Jane Summerson**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D C 20460

OFFICE OF  
ENFORCEMENT AND  
COMPLIANCE ASSURANCE

AUG 11 2008

Dr Jane Summerson  
EIS Document Manager  
Regulatory Authority Office  
Office of Civilian Radioactive Waste Management  
U S Department of Energy  
1551 Hillshire Dr , M/S 011  
Las Vegas , NV 89134

Dear Dr Summerson

In accordance with our responsibilities under Section 309 of the Clean Air Act (CAA) and the National Environmental Policy Act, the Environmental Protection Agency (EPA) has reviewed the Department of Energy's (DOE) Final Supplemental Environmental Impact Statement (SEIS) on the Nevada Rail Transportation Corridor for the proposed Yucca Mountain Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste (CEQ #20080264) and Final Environmental Impact Statement (EIS) for a Rail Alignment for the Construction and Operation of a Railroad in Nevada to the proposed Yucca Mountain Repository (CEQ #20080265)

Comments on the Nevada Rail Corridor Final SEIS

As stated in our January 10, 2008 comment letter on the draft SEIS, EPA supports DOE's conclusion to evaluate potential alignments in the Caliente and Mina Rail Corridors. We understand that the Walker River Paiute Tribe continues to object to a rail line transporting nuclear waste across its Reservation. As a result, the Mina rail corridor was designated as the "non-preferred" alternative. *Appendix F Floodplain and Wetlands Assessment* of the Rail Alignment final EIS provides additional information on the floodplain and wetlands associated with the Caliente, Mina and Eccles rail alignments. Additional information is also provided regarding potential impacts to wetlands and proposed modifications to the alignment alternatives to minimize wetland impact. Accordingly, we reiterate that EPA does not have any concerns about this project.



## Comments on the Rail Alignment Final EIS

DOE proposes to construct and operate a railroad in Nevada to transport spent nuclear fuel, high-level radioactive waste, and other materials to a repository at Yucca Mountain. DOE intends to implement this action through the use of the Caliente Rail Corridor.

EPA appreciates the efforts DOE has made to address our comments on the Rail Alignment Draft EIS. The revised *Appendix F, Floodplain and Wetlands Assessment*, includes an analysis of how the proposed discharges of fill material associated with the construction of the rail line and support facilities would meet the requirements of the Clean Water Act Section 404(b)(1) Guidelines ("Guidelines"). The Final EIS provides additional clarification regarding 1) the extent of waters of the U.S. that may be impacted by the proposed alignments, 2) a description of the nature of the potential impacts, and 3) a differentiation between impacts that would occur from construction of the rail line, staging yards, interchange yards and quarries. The final EIS also contains additional information regarding the practicability of the Eccles and Mina alternatives. In addition, DOE evaluates rail alignment alternatives to minimize impacts to waters of the U.S.

According to the information in Appendix F, direct impacts to waters of the U.S. resulting from the preferred project alignment have been reduced from up to 81 acres to 8.6 acres (Table F-6). DOE evaluated alternatives to avoid wetlands. Based on that evaluation, there is no location in the Caliente Rail Corridor that would completely avoid all wetlands.

Further analysis was conducted to minimize the amount of wetland fill along the Caliente alternative segment. The construction right-of-way along this segment would be reduced to 30 meters to minimize wetlands impacts (F-26). In addition, in some areas (e.g., Bennett Springs Wash), the roadbed was shifted to avoid additional wetlands (F-27), and the rail line would be constructed on the abandoned Union Pacific Railroad road bed. In addition, where practicable, bridge abutments would be placed out of wetlands (F-27). Through an evaluation of alternatives, DOE is also proposing to place the staging yard to the west of the abandoned rail road bed at the Upland Site avoiding all wetlands as compared to the Indian Cove Staging Area (47.0 acres) (F33-34), and has proposed a quarry siding site with less wetlands impacts from two locations originally being considered (F-34).

DOE also examined other locations in eastern Nevada to interface with the Union Pacific Railroad Mainline, such as existing sidings between the Utah border and Caliente, but could not find a practicable location with sufficient flat terrain to construct an interchange yard or an associated alignment that would not exceed the maximum allowable grade or other design requirements (F-66).

Based on the additional information and analysis provided in the final EIS (Appendix F), it appears that the preferred Caliente alignment, as described in the final EIS, represents the least environmentally damaging practicable alternative

In our comments on the draft EIS, we requested DOE provide a detailed compensatory mitigation plan for unavoidable impacts. The Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material, require compensatory mitigation for unavoidable impacts to waters (see 40 CFR 230.10(d) and 40 CFR Part 230, Subpart J, 73 Fed. Reg. 19594). The final EIS identifies compensatory mitigation options for the wetland impacts associated with the preferred alignment (F-73). These options include onsite restoration/creation and enhancement (e.g., cattle exclusion fencing, riparian plantings), as well as off-site mitigation through a partnership with BLM (e.g., riparian plantings, fish passage barrier removals, instream debris removal). However, while some of these options appear viable, the proposed mitigation is too conceptual at this time to determine whether it would adequately compensate for the loss of 8.6 acres of wetlands, as required by the Guidelines. Further, we note that EPA generally does not support cattle exclusion along the railroad right-of-way as part of the compensatory mitigation plan to offset impacts to aquatic resources. Typically, fencing of these areas is conducted to prevent cattle from accessing the rail line and causing any rail mishaps.

The wetlands that will be impacted by the Caliente rail alignment alternative represent one of the few remaining riparian areas in southern Nevada that support mature native vegetation. These wetlands provide habitat for wildlife, including the endangered southwestern willow flycatcher. To achieve adequate replacement of lost acreage and function, EPA recommends implementing one of the following compensatory mitigation options:

- 1) 3:1 restoration or creation of wetlands of equivalent function within the watershed
- 2) 1:1 restoration or creation of wetlands of equivalent function within the watershed, and 5:1 non-native plant removal within the watershed
- 3) 1:1 restoration or creation of wetlands of equivalent function within the watershed, and 5:1 enhancement of the riparian wetland habitat in Upper Meadow Valley, including Rainbow Canyon.

The mitigation ratios presented above are based on: 1) the uncertainty of the science of mitigation, 2) the challenges associated with wetland creation/restoration in an arid environment, and 3) the temporal loss of function until the wetland matures. Each of the mitigation options includes a minimum 1:1 restoration/creation component. The higher ratios for enhancement (e.g., non-native plant removal and riparian plantings) account for the fact that enhancement does not replace lost wetland acreage. Enhancement provides a lift to specific functions within the suite of functions these wetlands perform. These mitigation ratios are also based on the assumption that the specific wetland restoration/creation and enhancement projects will complement restoration and enhancement efforts currently underway in the Meadow Valley Wash watershed.

Moreover, as part of the restoration and enhancement, a monitoring and management plan must be developed and implemented, consistent with the requirements of the Wetlands Compensatory Mitigation Rule found in 40 CFR 230.94-230.97 (73 FR 19594, published April 10, 2008). Further, the Army Corps of Engineers' Sacramento District has developed its Mitigation and Monitoring Proposal Guidelines, December 30, 2004, which recommends a mitigation monitoring period of 10 years, with the possibility of demonstrating success in 7 years. In addition, DOE should implement Best Management Practices to control storm water discharges during project construction to minimize impacts to the water quality from the proposed project.


### Conclusion

As noted above, EPA agrees with the conclusions of the Nevada Rail Corridor final SEIS and does not object to the implementation of this action. Regarding the Rail Alignment final EIS, EPA supports the conclusions of the *Floodplain and Wetlands Assessment* contained in Appendix F, provided that DOE provides adequate compensatory mitigation for wetland losses, as discussed above. It is our understanding, based on our July 16, 2008, conference call, that DOE will provide a more detailed compensatory mitigation plan in the Record of Decision (ROD).

We appreciate the opportunity to review and comment on this document and look forward to continued collaboration on this project as it moves forward to the final design stage. Should there be modifications to the project as it is currently proposed in the final EIS, we request that DOE resubmit a revised *Floodplain and Wetlands Assessment* as well as the mitigation plan for review. We also request a copy of the ROD upon its conclusion.

We appreciate the opportunity to review and comment on these documents. If you have any further questions you may contact me at (202) 564-5400. You may also call my staff point of contact, Marthea Rountree. She can be reached at (202) 564-7141.

Sincerely,



Susan E. Bromm  
Acting Director  
Office of Federal Activities

**Finance Docket No 35106**

**APPENDIX E**

**United States Department of Energy Policy Statement for  
Use of Dedicated Trains for Waste Shipments to Yucca Mountain**



**Department of Energy**

Washington, DC 20585

QA NA

July 6, 2005

MEMORANDUM FOR PAUL M GOLAN  
PRINCIPAL DEPUTY DIRECTOR  
OFFICE OF CIVILIAN RADIOACTIVE  
WASTE MANAGEMENT

FROM

GARY LANTHRUM, DIRECTOR   
OFFICE OF NATIONAL TRANSPORTATION  
OFFICE OF CIVILIAN RADIOACTIVE  
WASTE MANAGEMENT

SUBJECT.

ACTION APPROVE POLICY TO USE DEDICATED  
TRAINS FOR OCRWM SHIPMENTS OF SPENT  
NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE  
WASTE TO YUCCA MOUNTAIN

ISSUE:

Should the Office of Civilian Radioactive Waste  
Management (OCRWM) adopt a policy to use dedicated  
train service (DTS) for its usual rail transport of spent  
nuclear fuel (SNF) and high-level radioactive waste  
(HLW) to the Yucca Mountain repository?

BACKGROUND.

On April 8, 2004, the Department issued a record of  
decision on using rail as the preferred mode for transport  
of SNF and HLW to the repository. Using rail would  
result in fewer shipments than using trucks and would  
reduce environmental impacts.

The term "dedicated train" refers to train service  
dedicated to one commodity (in this case, SNF and  
HLW). The use of DTS for fuel shipments has been a  
contentious issue since the mid-1970s, when the railroad  
industry attempted to require that the Office of Naval  
Reactors (NR), among others, use DTS for SNF  
shipments. Courts have held that railroads cannot force  
use of dedicated trains, and the use of both service types  
is reflected in the Union Pacific Settlement Agreement,  
filed with the Surface Transportation Board on  
September 15, 2004.

Members of Congress and stakeholders, such as the  
railway industry, the Federal Railroad Administration  
(FRA), nuclear trade groups, State and regional  
organizations, and the general public, have strongly



endorsed the use of dedicated trains, primarily because they argue their use will increase safety. Proponents generally believe DTS will reduce risk, both from a radiological and non-radiological accident standpoint. FRA is preparing to issue a study which concludes dedicated trains offer safety benefits over use of general freight.

Past and current SNF shipping campaigns by Department of Energy (DOE) programs, including fuel from Three Mile Island and the West Valley Demonstration Project, the Foreign Research Reactor SNF Acceptance Program, and commercial campaigns, such as the Shoreham-Limerick and Brunswick/H. B. Robinson-Shearon Harris plants, have used DTS.

## DISCUSSION

Issues related to use of dedicated trains can be grouped into categories of safety, security, cost and operations.

**Safety** DOE's position is that fuel is shipped safely regardless of mode or type of service, primarily due to the stringent regulations in place and the robust nature of the transport packages involved.

- Our most current National Environmental Policy Act analysis (attached) is consistent with the FRA study (draft also attached)—that radiological risk resulting from transport without incident may be lower due to decreased time in transit.

**Security** DOE shipments have been and will continue to be made securely using both DTS and general freight service. Escort and other physical protection features can be employed using either type of service (the Navy deploys its protective measures using both). DTS does offer some potential advantages, such as:

- DTS affords increased command and control capabilities. Shorter DTS trains allow better visual monitoring from the locomotive and escort car.
  - Lengthy "dwell times" in railyards (average of 29 hours in each yard) may be avoided.
-

**System Cost** Our analysis (attached) indicates that the primary benefit of using DTS is the significant cost savings over the lifetime of the Yucca Mountain project

- The cost of DTS is offset by a reduced fleet size and its attendant operations and maintenance (as the attached materials indicate)
  - Transit and turnaround times will be shorter using DTS, enabling the repository to operate with fewer casks and fewer railcars (i.e., equipment will not sit idle in railyards)
  - In contrast, using general freight service would increase the required size of the cask and railcar fleet by about 40 percent due to the increased transit time associated with general freight service
- Use of dedicated trains provides greater operational flexibility and efficiency for the waste management system due to reduced time in transit, and greater predictability in routing and scheduling.
  - Repository operational resources could be better managed by taking advantage of more predictable shipment and receipt schedules
  - Transportation planning and operations could be simplified by narrowing mode and type to mostly rail coupled with the use of DTS

## POLICY IMPACT

NR and the Office of Environmental Management (EM) currently ship SNF and HLW. Neither has a policy on DTS, although both have sometimes used it. Some railroads on occasion have elected to use DTS trains for NR shipments, at their own expense.

Adoption of a DTS policy by OCRWM should not impact current or planned EM or NR shipments, so long as we make clear, as stated in the *DOE Transportation Practices Manual*, that DTS "will be used if it enhances operations." Our initial analysis has concluded DTS could reduce costs of a large-scale SNF transport system. EM and NR operations are much smaller in size and complexity, and DTS may or may not result in savings or operational advantages for those programs.

**SENSITIVITIES**

All DOE shippers of SNF, and commercial shippers as well, will continue to use either DTS or general freight service based on considerations of logistics and cost, and, as in either mode of transport, shipments will be safe and secure. Both types are, and are expected to remain, safe and secure, as are truck shipments of SNF.

OCRWM can expect to benefit from planning on use of DTS, however, the project must be able to use general freight service and truck as needed. OCRWM should closely follow industry developments, capacity forecasts, etc., to ensure DTS remains a cost-effective choice, and should make clear to its stakeholders it retains the option to modify its policy as appropriate.

**NEXT STEPS**

If approved, the policy announcement will be made as a routine matter in letters to State regional groups and in presentations at technical and stakeholder meetings.

**RECOMMENDATION:** I recommend you approve adoption of a policy to use dedicated trains as the usual mode of rail service for OCRWM's shipments to Yucca Mountain.

APPROVE: \_\_\_\_\_



DISAPPROVE: \_\_\_\_\_

DATE \_\_\_\_\_

3 July 2025



CONCURRENCES Congressional/Sigal 4/4/05  
General Counsel/Fygis 3/30/05  
Naval Reactors/Donald 3/29/05  
Environment, Safety and Health/Shaw 3/11/05  
Environmental Management/Marcinowski 3/30/05

Finance Docket No 35106

**APPENDIX F**

*Final Supplemental Environmental Impact Statement for a  
Geologic Repository for the Disposal of Spent Nuclear  
Fuel and High-Level Radioactive Waste  
at Yucca Mountain, Nye County, Nevada,  
DOE/EIS-0250F-S1*